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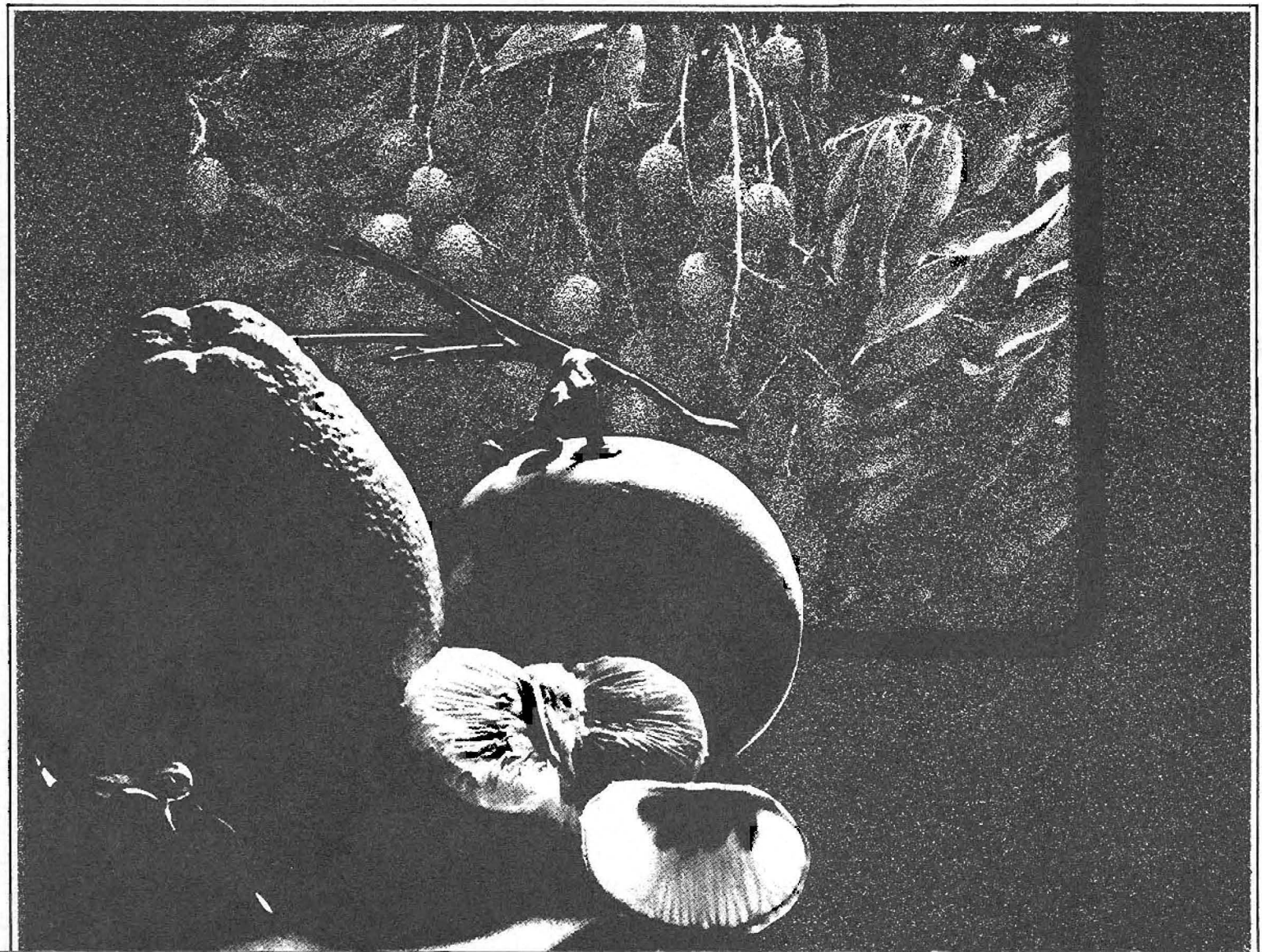
FOODS OF HAWAII AND THE PACIFIC BASIN
Fruits and Fruit Products: Raw, Processed, and Prepared

Volume 4: Composition

Nao S. Wenkam

HITAHR · COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES · UNIVERSITY OF HAWAII



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Lastly, I respectfully acknowledge the contribution of the late Carey D. Miller, Professor Emerita of Foods and Nutrition, University of Hawaii, to food composition studies in the Pacific Basin. Her studies, begun with six white rats hand carried to Hawaii in 1922, laid the groundwork for nutrition research in Hawaii.

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FOREWORD

Food composition information is essential if we are to apply the modern science of nutrition to the practical, everyday selection of foods included in our diets. More than 40 nutrients are believed essential for the normal growth, development, and functioning of human beings, although complete information concerning the requirements, functions, availability, and so forth of each is not currently available. Homemakers, dietitians, and individuals are faced with the seemingly overwhelming problem of preparing meals that meet the nutritional requirements of their families, their clients, or themselves. Food composition tables help by providing data about foods rich in specific nutrients.

This volume, prepared by Nao S. Wenkam, is particularly useful to residents of Hawaii since it focuses on the nutrient composition of those foods commonly used in Hawaii and the Pacific Basin, with detailed descriptions of each sample, so important in using composition data. I suspect that all professional nutritionists and dietitians who work in this area have been frustrated by the lack of published information about foods consumed by the various ethnic groups living in the Pacific Basin. This frustration should be eased somewhat by the extensive data provided here.

Another feature of the publication, one often missing in many resource books, is that it includes the nutrients for foods in raw, processed, and prepared forms. The nutrients in an edible portion of 1 pound of food as purchased are also provided. The values given in this publication are all laboratory analyzed, and none has been imputed from other data. This type of presentation should be useful to those concerned with nutrient losses from foods passing through each stage of preparation—from purchase to individual serving.

I am certain that many will find this publication, the fourth in a series, a welcome addition to our resource material in the field of nutrition. Additional information, however, is still needed on food composition, and I look forward to the forthcoming contributions by the author.

R. Van Reen
Department of Food Science
and Human Nutrition

INTRODUCTION

This table is intended to replace previous ones and to serve as a standard of reference until it shall in its turn be replaced by a larger and more complete compilation.

W. O. Atwater
U.S. Department of Agriculture, 1896

Many plant foods of Asia and the Pacific islands are available in the marketplaces of Hawaii, reflecting the geographic origin and cultural heritage of the population. A whole range of fruits little known or used in the rest of the Western Hemisphere are excellent sources of some critical nutrients and merit attention today.

This publication is part of a series designed to revise and expand information on nutritive value and related data on foods of consequence to Hawaii and the Pacific Basin. It makes available under one cover nutrient profiles of foods formerly scattered among several sources. The data are organized to accomplish the following: (1) combine on one page the energy and nutrient content for a single food item; (2) enlarge the scope of nutrient listings to include the amounts found in edible portions of 2 common measures of food and 1 pound of food as purchased, as well as 100 grams; and (3) issue information on major food groups as work is completed. Two volumes on vegetables have been published (*16*, *17*).

The information is intended primarily for use with retail market supplies prepared and used in the home, and may or may not apply to wholesale supplies or large-scale institutional operations. The selection of items analyzed was guided by their potential use in nationwide food consumption surveys, which now include Hawaii. This publication, *Fruits and Fruit Products*, contains values for 100 raw, prepared, and processed foods.

All data in the tables are from laboratory analyses only and do not contain estimated, derived, or imputed values from another form of the food or from a similar food. Some data are taken from previous publications for which the original raw data were available to verify analytical values and samples. Single values are provided for energy, proximate constituents (water, protein, total lipid, total carbohydrate, fiber, ash), minerals (calcium, iron, magnesium, phosphorus, potassium, sodium), and vitamins (ascorbic acid, thiamin, riboflavin, niacin, vitamin A), although more than one sample lot may have been analyzed. Where the number of samples analyzed is greater than two, the standard error of the mean and the number of samples are given. In Table 1 attention is directed to the practice of reporting values adjusted to the moisture content shown, where several sample lots were used in the analyses of an item and the moisture content varied among the lots. (Mean moisture figures are given in Table 2.) Since this practice changed some values significantly, the values before adjustment are reported in Table 3. (The derivation of single values and adjusted values is given under Results and Discussion.)

Values shown in Table 1 are the amounts contributed by the edible part of a designated quantity of the listed foods. Quantities specified by volume or pieces as well as by weight have a practical application in evaluating diets, since in the United States food portions are more commonly expressed by volume (e.g., 1 cup of juice) than by weight (240 grams of juice), whereas nutritive value is reported by weight. The nature and content of the inedible portion or refuse are shown with each item in the table.

Tables 4, 5, and 6 illustrate variations in nutritive value associated with factors such as horticultural variety, stage of maturity, and soil-water conditions. Data for all tables are stored at the University of Hawaii Computing Center or at the Department of Food Science and Human Nutrition (formerly known as Foods and Nutrition; Nutrition; and Food and Nutritional Sciences).

Although most of the figures in the tables are determined from single samples of a food, the data constitute a substantial base for a broader understanding of the composition of those tropical and Asian foods represented. With a computer-based nutrient data bank, data can be examined to identify relationships among nutrients or other parameters, and to identify sources of critical nutrients among lesser known or infrequently consumed items in Hawaii and Pacific Basin diets. Continued research—to expand the number of essential nutrients analyzed, to seek new sources of

nutrients, and to fill voids in these tables—will provide the data for a broader and firmer base than is presently available.

SOURCES OF DATA

The nutritive values are from chemical analyses and vitamin assays originating in the former Department of Food and Nutritional Sciences, University of Hawaii. Half of the values represent unpublished data completed during the period of the grant. The other half are from the original analytical data used in preparing earlier Hawaii Agricultural Experiment Station publications. Thus, 42 percent of the values are taken from analyses done for *Composition of Hawaii Fruits* (*18*), *Vitamin Values of Foods Used in Hawaii* (*9*), "The Sodium Content of Hawaii-grown Fruits and Vegetables in Relation to Environment" (*19*), and "Sodium and Potassium in Some Hawaii Foods" (*20*), all co-authored by this author. About 8 percent are from the proximate composition and mineral analyses done for *Some Fruits of Hawaii* (*8*). A small portion is taken from "The Composition of Hawaiian Fruits and Nuts" in the *Report of the Hawaii Agricultural Experiment Station* (*15*) and from *Fatty Acids, Cholesterol, and Proximate Composition of Certain Prepared and Unprepared Foods in Hawaii* (*13*). Parts of the data for coconut were taken from *Some Tropical South Pacific Island Foods* (*11*).

EXPERIMENTAL PROCEDURE

Foods analyzed for previous departmental publications were not reanalyzed unless there was reasonable doubt that earlier values would be applicable to the item on the market today.

Collection, Preparation, and Sampling

A sample record form, developed to catalog systematically factors known to affect the nutritional composition of foods—for example, varietal type, maturity, cultivation environment, geographic location, processing, and other treatments prior to collection, as well as handling in the laboratory—was filed for each food item. Details such as measurements of total sample weight, individual sizes and weights as purchased and in edible portions, yields in preparation, photographs, and labels were included. Much of this information, as well as copies of the sample record forms used, appears in Appendices A and B.

Most of the items were purchased at the market in the morning and prepared for analyses that same day. Fresh products were washed and excess water was removed by draining, patting with paper towels, or drying with an electric fan. Details regarding laboratory preparation, e.g., peeling or paring of the skin, cooking method, etc., are provided in Appendix A. Canned or processed items in liquid were drained in a colander or on paper towels, if the liquid normally would be discarded by the user. Wherever possible the procedure for the preparation of a food item followed that described in the studies of the composition of Hawaii fruits (*18*) and vitamin values of foods (*9*).

For sampling, the edible portion, cut into 1- to 1½-inch cubes or pieces, was thoroughly mixed, and subsamples were withdrawn for individual analyses. Subsamples for proximate components, mineral, and provitamin A analyses were chopped into fine pieces or blended in an electric blender. For the assay of water-soluble vitamins, one part coarsely cut cubes or pieces and one part or more of the extracting acid were blended to prepare a slurry from which aliquots were taken. With large items, such as watermelon and pineapple, longitudinal sections from opposite sides of each item, e.g., opposite quarters, were removed and cut into 1- to 1½-inch cubes for subsampling.

Analytical Methods

Analyses of proximate components and minerals were done in duplicate or triplicate. Vitamin assays were done in duplicate or triplicate, with a recovery test except in the ascorbic acid assay.

Moisture. The percentage of moisture in foods was determined on all samples, with a few exceptions. From 5 to 10 grams of comminuted sample were dried in a vacuum oven to constant weight. For previous publications, approximately 5 grams of sample were dried for 48 hours in an electric drying oven at 65° to 80°C and held *in vacuo* in a desiccator for another 24 hours.

Protein. The Winkler boric acid modification of the Kjeldahl method was used (*6*). The sample was digested with concentrated sulfuric acid, the solution made alkaline with sodium hydroxide, and the liberated ammonia distilled into a boric acid solution. The amount of ammonium borate formed was measured by titration with standard sulfuric acid. The factor used to convert nitrogen content to protein accompanies each item in Table 1. In fruits, the factor is 6.25, as the proteins contain 16 percent nitrogen. For other classes of foods, the table of conversion factors from the U.S. Department of Agriculture is reproduced in Table 7 (*7*). In

previous publications, the Gunning method of the Association of Official Agricultural Chemists was used (*1*).

Total lipid. Ether extract was determined using the procedure of the Association of Official Analytical Chemists (AOAC), 1970 (*2*). Dry material was extracted with anhydrous ethyl ether for 4 hours in the Goldfisch fat extraction apparatus and the extract dried at 100°C to constant weight. Lipid includes, in addition to the true fats, various fatty acids, sterols, chlorophyll, and other substances of similar solubility.

Fiber. The AOAC method was followed (*2*). The ether extract residue was treated for 30 minutes each with boiling acid and alkali. The residue was dried to constant weight at 110°C, incinerated, and the loss in weight reported as crude fiber. It is made up largely of cellulose, hemicellulose, and lignin.

Ash. This refers to the total mineral matter residue after incineration. Samples were ashed in acid-washed, tared vycor dishes in an electric muffle furnace at 525°C for 6 hours or until a white or light gray ash was obtained. In previous publications, samples were ashed overnight, 16 hours, at 450°C.

Calcium, iron, magnesium, potassium, sodium. The atomic absorption spectrophotometric method was used on the ash solutions prepared with HCl. Previous studies used the McCrudden method for determining calcium as calcium oxalate (*5*), the ortho-phenanthroline method for the colorimetric determination of iron (*12*), and flame photometry for potassium and sodium. The mineral contents in the tables represent the total amounts as determined analytically and may or may not be amounts available to the body.

Phosphorus. The inorganic phosphate autoanalyzer method, based on the formation of phosphomolybdic acid, which is then reduced by stannous chloride hydrazine, was used (*14*). This method superseded the Fiske and Subarrow procedure used in previous publications in which reduction was by 1-amino-2-naphthol-4-sulfonic acid (*4*).

Ascorbic acid. Reduced ascorbic acid was determined by the dye (2,6-dichlorophenol indophenol) method, visual titration, or photoelectric colorimetry, as given by the Association of Vitamin Chemists (AVC) (*3*). The method is based on the reduction of the dye by an acid solution of ascorbic acid. In the absence of interfering substances, the capacity of a sample extract to reduce a standard solution of dye is directly proportional to the ascorbic acid content of the sample.

Thiamin. The thiochrome procedure outlined by AVC, which depends on the oxidation of thiamin to thiochrome, a fluorescing compound, was used. Under standard conditions the fluorescence is proportional to the thiochrome present and, hence, to the thiamin in the original solution.

Riboflavin. The AVC fluorometric method was used. This vitamin is a naturally occurring fluorescent compound, and in dilute solutions the intensity is proportional to its concentration.

Niacin. The AVC chemical method superseded the microbiological method and is based on the reaction of niacin with cyanogen bromide to give a pyridinium compound. This compound undergoes rearrangement, yielding derivatives that couple with aromatic amines to produce colored compounds. Under standard conditions the density of the color produced is proportional to the niacin present.

Carotene (vitamin A value). The AVC chromatographic method that separates biologically active carotenoid pigments from nonactive pigments was used with slight modifications. The extracting solvents were 1 percent alcoholic potassium hydroxide, acetone, and petroleum ether (BP 60°–70°C) in equal proportions; the adsorbent was a 1:1 mixture of magnesium oxide and Hyflo Super-Cel; and the eluent was 3 to 10 percent acetone in petroleum ether. The extract was measured in an Evelyn colorimeter using a 440-millimicron wavelength filter, and the carotene concentration was determined by reference to a calibration curve (90 percent beta- and 10 percent alpha-carotene mixture dissolved in petroleum ether).

Conversion Factors

Carbohydrate values include fiber and were calculated by difference, i.e., by subtracting the sum of the percentages of water, protein, lipid, and ash from 100 percent. Carbohydrate values are therefore affected by variations in the other proximate components. They do not represent carbohydrate as defined chemically. The values include sugars and starches, which the body uses almost completely; fiber and pentosans, which are used less completely; and organic acids, which are not true carbohydrates.

Food energy values expressed in kilocalories and kilojoules were calculated using the factors based on the Atwater system (Table 8). Specific factors were applied to the protein, lipid, and carbohydrate values in order to calculate the physiological energy value, or the portion of the gross energy value available after deductions have been made for losses in digestion and

metabolism. The kilocalorie is defined as the amount of heat required to raise the temperature of 1 kilogram of water from 15° to 16°C. The kilojoule is the unit for expressing energy in the International System of Units, and energy values were multiplied by 4.184 to convert from kilocalories to kilojoules.

The vitamin A values are expressed in International Units (IU) and microgram Retinol Equivalents (mcg RE). Since plants do not contain preformed vitamin A, the values are derived from the active carotenoid pigments. One IU is equivalent to 0.6 mcg of beta-carotene and 1.2 mcg of other biologically active carotenoids. Because the active carotenoids were not separated into beta- and the other carotenoids by the method used, *1 mcg of the combined, presumably biologically active carotenoids was considered to be equivalent to 1 IU* as in the earlier publication on fruits from this department (*18*), and to 0.1 RE.

RESULTS AND DISCUSSION

The food items in Table 1 are arranged in alphabetical order by common names and scientific names. The fruit in raw form appears before the processed form, in cases where both appear. Item numbers begin with a designation for the major food group, 02 for fruits and fruit products, followed by a number assigned to the specific item.

Nutritive Values

Most of the figures in Table 1 are from single market samples and may or may not be representative of the reader's sample. The table provides the most reliable data currently available on Hawaii fruits, and readers are encouraged to evaluate and interpret the data with recognition of the limitations.

Column A lists the nutrients analyzed and the units of measure. In column B, the data are shown in terms of a 100-gram edible portion. At times different lots were used to determine the 15 nutrients in an item, e.g., Lot 1 for proximate composition and minerals and Lot 2 for vitamins. The moisture content was determined in every lot used, and more often than not it varied between or among lots. Instead of calculating a mean, the moisture value shown was taken from the sample lot in which the largest number of nutrients were analyzed, e.g., Lot 1 in the example above. Then the vitamin values from Lot 2 were adjusted to correspond to the single moisture content of Lot 1.

When a nutrient was determined more than once, e.g., protein content of several sample lots, the protein values were adjusted to correspond to the moisture content shown in Table 1, prior to calculating a mean. Multiple lot analyses are identified in column D and in Appendix A. This practice of converting to a single moisture basis is not uncommon; comparisons of food composition are often made on the dry weight basis, or zero percent moisture. Readers interested in mean moisture figures are referred to Table 2. Variation in moisture content of foods is known to reflect such factors as maturity, handling after harvest, and storage, and was not unexpected.

To aid critical users, footnotes in Table 1 identify adjusted nutrient values. As a result of adjustment fewer than 1 percent of the values were significantly changed. A significant difference was defined as one-twentieth of the Recommended Dietary Allowance for an adult male, for each nutrient, as follows:

Protein	3	grams
Calcium	50	milligrams
Iron	0.5	milligram
Magnesium	18	milligrams
Phosphorus	40	milligrams
Ascorbic acid	3	milligrams
Thiamin	0.07	milligram
Riboflavin	0.08	milligram
Niacin	0.9	milligram
Vitamin A	250	International Units or 25 mcg RE

For other nutrients:

Lipid	1	gram
Ash	1	gram
Potassium	100	milligrams
Sodium	100	milligrams

For comparison with nutrient values before adjustment, see Table 3.

The number of decimal places and the number of significant figures differ from those of previous publications. When we incorporated previously published data, with fewer decimal places than used here, we consulted the original raw data.

Space for a nutrient was left blank if the nutrient were not analyzed, or if the validity of the figure were in doubt and not resolved prior to publication. A zero is shown for nutrients if present in trace amounts. Trace is defined as follows: less than (<) 1 milligram for ascorbic acid, < 0.010 milligram for thiamin and riboflavin, < 0.10 milligram for niacin, and < 10 IU or 1 mcg RE for vitamin A.

In column C the standard error of the mean is given where the number of samples identified

in column D is greater than two, in order to give estimates of variability and reliability. Although in some of the early publications a few values were averages of three or more analyses, standard errors were not determined.

Household and Retail Market Measures

The amounts of nutrients in household or retail market measures of a food, referred to as common measures in Table 1, are shown in columns E and F. Common measures are convenient quantities that may or may not be average serving sizes; nutritive values were calculated from the values in column B. The same number of decimal places shown in column B was retained in columns E and F. The common measure does not include the refuse, and the weights were rounded to the nearest gram in the approximate range of 10 to 50 grams and to the nearest 5 grams above that range. The portion usually discarded is identified in column G.

Although at least five separate weight measurements of common measures were taken for each item and averaged, the weights varied widely for some items. The weight of 1 cup of irregularly shaped items such as roselle, shredded coconut, and sliced or diced pieces was affected by the size of the pieces and the pressure applied in filling the cups, and therefore may vary from published weights. The linear dimensions, given as length by maximum diameter, if followed by the term *as purchased*, include the skin or peel. Fruits usually visualized with the skin on were described in this manner even if they are peeled before eating, e.g., bananas and oranges. However, the weight and nutritive values apply only to the edible portion.

Values in column G, the amounts of nutrient in the edible portion of 1 pound of food as purchased, were calculated from the data in column B, and the same number of decimal places was retained. A description of the parts considered refuse is shown in column G, as well as the total percentage of refuse; however, the different parts considered refuse—for example, skin and seeds—were measured separately. This information is on file in the Department of Food Science and Human Nutrition and will appear in another publication on yields and losses in preparation. The liquid portion of canned and processed foods normally not consumed was designated as refuse. The value of column G lies in providing estimations of nutritive values in foods composed of both edible and inedible portions as purchased. For example, to calculate the nutritive value of a pound (453.6 grams) of whole papaya, composed of 31 percent skin and seeds (refuse) and 69 percent edible portion, determine the weight of the edible portion as follows: 0.69×453.6 grams = 313.0 grams. Multiplying the nutrient values for 100 grams edible portion in column B by the factor 3.130 provides the nutrient values for 1 pound of whole fruit.

Variations in Ascorbic Acid and Sodium Values

The wide range of ascorbic acid values in over 30 horticultural varieties and samples of mango is illustrated in Table 4. There is nearly a 30-fold range, 5 mg to 142 mg ascorbic acid per 100 grams.

Changes in ascorbic acid values of three fruits during ripening are shown in Table 5. All mango varieties tested contained more ascorbic acid in the green and half-ripe stages than in the ripe stage. On the other hand, in papaya and poha the ascorbic acid content increased as the fruit matured.

A marked response to different soil and water concentrations of sodium is illustrated with papaya (Table 6). In this fruit the highest concentration (76 mg sodium per 100 grams) was more than 20 times that of the lowest (3.6 mg sodium per 100 grams), which is of significance for individuals on restricted sodium diets. In general, sodium values in papaya varied with those in the soil and water environment.

Table 1. Nutritive values of foods: raw, processed, prepared

Acerola
Malpighia glabra

Item no. 02-001

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 6 g	100 g	Refuse: 20 % seed stem end
Proximate:						
Water.....g	91.10		1	5.47	91.10	330.58
Energy.....kcal	31			2	31	112
.....kJ	130			8	130	472
Protein(6.25).....g	0.68		1	0.04	0.68	2.47
Lipid(fat).....g	0.19		1	0.01	0.19	0.69
Carbohydrate.....g	7.58			0.45	7.58	27.51
Fiber.....g	0.60		1	0.04	0.60	2.18
Ash.....g	0.45		1	0.03	0.45	1.63
Minerals:						
Calcium.....mg	9		1	1	9	33
Iron.....mg	0.17		1	0.01	0.17	0.62
Magnesium.....mg	19		1	1	19	69
Phosphorus.....mg	16		1	1	16	58
Potassium.....mg	217		1	13	217	787
Sodium.....mg	5		1	0	5	18
Vitamins:						
Ascorbic acid.....mg	2330.00		1	139.80	2330.00	8455.10
Thiamin.....mg	0.028		1	0.002	0.028	0.102
Riboflavin.....mg	0.082		1	0.005	0.082	0.298
Niacin.....mg	0.340		1	0.020	0.340	1.234
Vitamin A.....RE	41			2	41	149
.....IU	408		1	24	408	1481

(E) 1st common measure: 1 medium, 7/8 x 7/8 inch as purchased, pitted = 6 grams
(F) 2nd common measure: 1 cup, medium as purchased, pitted = 100 grams

Sodium, potassium, and magnesium values are from a different sample lot and have been adjusted to the moisture content shown.

Apricot, semi-dried, sweet and sour
Prunus sp.

Item no. 02-002

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 30 g	115 g	Refuse: 0 %
Proximate:						
Water.....g	31.03		1	9.31	35.68	140.75
Energy.....kcal	249			75	286	1129
.....kJ	1040			312	1196	4717
Protein(6.25).....g	1.58		1	0.47	1.82	7.17
Lipid(fat).....g	1.22		1	0.37	1.40	5.53
Carbohydrate.....g	64.73			19.42	74.44	293.62
Fiber.....g	1.81		1	0.54	2.08	8.21
Ash.....g	1.44		1	0.43	1.66	6.53
Minerals:						
Calcium.....mg	37		1	11	43	168
Iron.....mg	1.72		1	0.52	1.98	7.80
Magnesium.....mg	17		1	5	20	77
Phosphorus.....mg	30		1	9	34	136
Potassium.....mg	366		1	110	421	1660
Sodium.....mg	247		1	74	284	1120
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium halves, 1 1/2 to 1 3/8 inch diameter as purchased = 30 grams
(F) 2nd common measure: 1 package, 4 ounces as purchased = 115 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Avocado, Beardslee
Persea americana and P. drymifolia

Item no. 02-003

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 35 % seed skin
				150 g	230 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	67.49		1	101.24	155.23	198.99
Energy.....kcal	233			350	536	687
.....kJ	974			1461	2240	2872
Protein(6.25).....g	0.27		1	0.40	0.62	0.80
Lipid(fat).....g	25.18		1	37.77	57.91	74.24
Carbohydrate.....g	5.80			8.70	13.34	17.10
Fiber.....g	1.18		1	1.77	2.71	3.48
Ash.....g	1.25		1	1.88	2.88	3.69
Minerals:						
Calcium.....mg	5		1	8	12	15
Iron.....mg	0.62		1	0.93	1.43	1.83
Magnesium.....mg	21		1	32	48	62
Phosphorus.....mg	80		1	120	184	236
Potassium.....mg	690		1	1035	1587	2034
Sodium.....mg	62		1	93	143	183
Vitamins:						
Ascorbic acid.....mg	2.30		1	3.45	5.29	6.78
Thiamin.....mg	0.039		1	0.058	0.090	0.115
Riboflavin.....mg	0.217		1	0.326	0.499	0.640
Niacin.....mg	0.790		1	1.185	1.817	2.329
Vitamin A.....RE	208			312	478	613
.....IU	2080		1	3120	4784	6133

(E) 1st common measure: 1 cup, 1/2 inch cubes = 150 grams
(F) 2nd common measure: 1 cup, pulp = 230 grams

Sodium, potassium, and magnesium values are from a different sample lot and have been adjusted to the moisture content shown.

Avocado, Hulumanu
Persea americana and P. drymifolia

Item no. 02-004

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 24 % seed skin
				220 g	150 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	82.79		1	182.14	124.18	285.41
Energy.....kcal	103			227	154	355
.....kJ	431			948	646	1486
Protein(6.25).....g	1.47		1	3.23	2.20	5.07
Lipid(fat).....g	9.26		1	20.37	13.89	31.92
Carbohydrate.....g	5.69			12.52	8.54	19.62
Fiber.....g	1.55		1	3.41	2.32	5.34
Ash.....g	0.79		1	1.74	1.18	2.72
Minerals:						
Calcium.....mg	8		1	18	12	28
Iron.....mg	0.54		1	1.19	0.81	1.86
Magnesium.....mg						
Phosphorus.....mg	34		1	75	51	117
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg	0.025		1	0.055	0.038	0.086
Riboflavin.....mg	0.094		1	0.207	0.141	0.324
Niacin.....mg	1.230		1	2.706	1.845	4.240
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1/2 medium, 7 inch length as purchased, peeled and pitted = 220 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 150 grams

Vitamin values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Avocado, Kahaluu
Persea americana and P. drymifolia

Item no. 02-005

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 25 % seed skin
				150 g	225 g	
	A	B	C	D	E	F	G
Proximate:						
Water.....g	68.96		1	103.44	155.16	234.60
Energy.....kcal	221			332	497	752
.....kJ	925			1388	2081	3147
Protein(6.25).....g	1.25		1	1.88	2.81	4.25
Lipid(fat).....g	23.49		1	35.24	52.85	79.91
Carbohydrate.....g	5.56			8.34	12.51	18.92
Fiber.....g	1.80		1	2.70	4.05	6.12
Ash.....g	0.70		1	1.05	1.58	2.38
Minerals:						
Calcium.....mg	8		1	12	18	27
Iron.....mg	0.40		1	0.60	0.90	1.36
Magnesium.....mg						
Phosphorus.....mg	21		1	32	48	73
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	7.50		1	11.25	16.88	25.52
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE	12			18	27	41
.....IU	119		1	178	268	405

(E) 1st common measure: 1 cup, 1/2 inch cubes = 150 grams
(F) 2nd common measure: 1 cup, pulp = 225 grams

Avocado, Nabal
Persea americana and P. drymifolia

Item no. 02-006

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 30 % seed skin
				215 g	150 g	
	A	B	C	D	E	F	G
Proximate:						
Water.....g	69.91		1	150.31	104.86	221.98
Energy.....kcal	209			449	314	664
.....kJ	874			1879	1311	2775
Protein(6.25).....g	1.03		1	2.21	1.54	3.27
Lipid(fat).....g	21.80		1	46.87	32.70	69.22
Carbohydrate.....g	6.33			13.61	9.50	20.10
Fiber.....g	2.02		1	4.34	3.03	6.41
Ash.....g	0.93		1	2.00	1.40	2.95
Minerals:						
Calcium.....mg	11		1	24	16	35
Iron.....mg	0.37		1	0.80	0.56	1.17
Magnesium.....mg						
Phosphorus.....mg	42		1	90	63	133
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	5.50		1	11.82	8.25	17.46
Thiamin.....mg	0.089		1	0.191	0.134	0.283
Riboflavin.....mg	0.142		1	0.305	0.213	0.451
Niacin.....mg						
Vitamin A.....RE	80			172	120	254
.....IU	802		1	1724	1203	2547

(E) 1st common measure: 1/2 medium, 4 1/4 x 4 inch diameter as purchased, peeled and pitted = 215 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 150 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Banana, Dessert, Bluefields or Gros Michel
Musa spp.

Item no. 02-007

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 115 g	155 g	Refuse: 27 % skin stem
A	B	C	D	E	F	G
Proximate:						
Water.....g	71.05		1	81.71	110.13	235.27
Energy.....kcal	102			117	158	338
.....kJ	427			491	662	1414
Protein(6.25).....g	1.46		1	1.68	2.26	4.83
Lipid(fat).....g	0.22		1	0.25	0.34	0.73
Carbohydrate.....g	26.47			30.44	41.03	87.65
Fiber.....g	0.57		1	0.66	0.88	1.89
Ash.....g	0.80		1	0.92	1.24	2.65
Minerals:						
Calcium.....mg	4		1	5	6	13
Iron.....mg	0.27		1	0.31	0.42	0.89
Magnesium.....mg	35		1	40	54	116
Phosphorus.....mg	23		1	26	36	76
Potassium.....mg	464		1	534	719	1536
Sodium.....mg	1		1	1	2	3
Vitamins:						
Ascorbic acid.....mg	6.00		1	6.90	9.30	19.87
Thiamin.....mg	0.036		1	0.041	0.056	0.119
Riboflavin.....mg	0.044		1	0.051	0.068	0.146
Niacin.....mg	0.700		1	0.805	1.085	2.318
Vitamin A.....RE	17			20	26	56
.....IU	172		1	198	267	570

(E) 1st common measure: 1 medium, 6 1/2 x 1 5/8 inch as purchased, peeled = 115 grams
(F) 2nd common measure: 1 cup, 1/4 inch slices = 155 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Banana, Dessert, Brazilian or "Apple"
Musa spp.

Item no. 02-008

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 70 g	140 g	Refuse: 31 % skin stem
A	B	C	D	E	F	G
Proximate:						
Water.....g	66.94		1	46.86	93.72	209.51
Energy.....kcal	118			83	165	369
.....kJ	494			346	692	1546
Protein(6.25).....g	0.87		1	0.61	1.22	2.72
Lipid(fat).....g	0.36		1	0.25	0.50	1.13
Carbohydrate.....g	31.07			21.75	43.50	97.24
Fiber.....g	0.68		1	0.48	0.95	2.13
Ash.....g	0.76		1	0.53	1.06	2.38
Minerals:						
Calcium.....mg	7		1	5	10	22
Iron.....mg	0.28		1	0.20	0.39	0.88
Magnesium.....mg	42		1	29	59	131
Phosphorus.....mg	30		1	21	42	94
Potassium.....mg	408		1	286	571	1277
Sodium.....mg	2		1	1	3	6
Vitamins:						
Ascorbic acid.....mg	14.60		1	10.22	20.44	45.70
Thiamin.....mg	0.041		1	0.029	0.057	0.128
Riboflavin.....mg	0.076		1	0.053	0.106	0.238
Niacin.....mg	0.590		1	0.413	0.826	1.847
Vitamin A.....RE	16			11	22	50
.....IU	158		1	111	221	495

(E) 1st common measure: 1 medium, 5 3/4 x 1 3/4 inch as purchased, peeled = 70 grams
(F) 2nd common measure: 1 cup, 1/4 inch slices = 140 grams

Vitamin, sodium, potassium, and magnesium values are from a different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Banana, Dessert, Chinese or Cavendish
Musa spp.

Item no. 02-009

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 41 % skin stem
				65 g	140 g	
Proximate:						
Water.....g	79.22		1	51.49	110.91	212.01
Energy.....kcal	72			47	101	193
.....kJ	301			196	421	806
Protein(6.25).....g	1.75		1	1.14	2.45	4.68
Lipid(fat).....g	0.18		1	0.12	0.25	0.48
Carbohydrate.....g	18.03			11.72	25.24	48.25
Fiber.....g	0.25		1	0.16	0.35	0.67
Ash.....g	0.82		1	0.53	1.15	2.19
Minerals:						
Calcium.....mg	2		1	1	3	5
Iron.....mg	0.35		1	0.23	0.49	0.94
Magnesium.....mg	26		1	17	36	70
Phosphorus.....mg	13		1	8	18	35
Potassium.....mg	302		1	196	423	808
Sodium.....mg	1		1	1	1	3
Vitamins:						
Ascorbic acid.....mg	8.00		1	5.20	11.20	21.41
Thiamin.....mg	0.026		1	0.017	0.036	0.070
Riboflavin.....mg	0.041		1	0.027	0.057	0.110
Niacin.....mg	0.610		1	0.396	0.854	1.632
Vitamin A.....RE	8			5	11	21
.....IU	82		1	53	115	219

(E) 1st common measure: 1 medium, 5 1/4 x 1 1/2 inch as purchased, peeled = 65 grams
(F) 2nd common measure: 1 cup, 1/4 inch slices = 140 grams

Vitamin and mineral values are from different sample lots and have been adjusted to the moisture content shown.

Banana, Dessert, Williams Hybrid
Musa spp.

Item no. 02-010

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 32 % skin stem
				135 g	155 g	
Proximate:						
Water.....g	71.33		1	96.30	110.56	220.02
Energy.....kcal	100			135	155	308
.....kJ	418			564	648	1289
Protein(6.25).....g	1.08		1	1.46	1.67	3.33
Lipid(fat).....g	0.13		1	0.18	0.20	0.40
Carbohydrate.....g	26.56			35.86	41.17	81.92
Fiber.....g	0.11		1	0.15	0.17	0.34
Ash.....g	0.90		1	1.22	1.40	2.78
Minerals:						
Calcium.....mg	5		1	7	8	15
Iron.....mg	0.49		1	0.66	0.76	1.51
Magnesium.....mg	40		1	54	62	123
Phosphorus.....mg	18		1	24	28	56
Potassium.....mg	494		1	667	766	1524
Sodium.....mg	1		1	1	2	3
Vitamins:						
Ascorbic acid.....mg	5.10		1	6.88	7.90	15.73
Thiamin.....mg	0.044		1	0.059	0.068	0.136
Riboflavin.....mg	0.045		1	0.061	0.070	0.139
Niacin.....mg	0.690		1	0.932	1.070	2.128
Vitamin A.....RE	9			12	14	28
.....IU	88		1	119	136	271

(E) 1st common measure: 1 medium, 6 1/2 x 1 3/4 inch as purchased, peeled = 135 grams
(F) 2nd common measure: 1 cup, 1/4 inch slices = 155 grams

Sodium, potassium, and magnesium values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Banana, Plantain or cooking, Largo
Musa spp.

Item no. 02-011

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 140 g	150 g	Refuse: 33 % skin stem
	A	B	C	D	E	F	G
Proximate:							
Water.....g	64.05		1	89.67	96.08	194.66
Energy.....kcal	126			176	189	383
.....kJ	523			732	784	1589
Protein(6.25).....g	1.28		1	1.79	1.92	3.89
Lipid(fat).....g	0.03		1	0.04	0.04	0.09
Carbohydrate.....g	33.37			46.72	50.06	101.42
Fiber.....g	0.43		1	0.60	0.64	1.31
Ash.....g	0.87		1	1.22	1.30	2.64
Minerals:						
Calcium.....mg	4		1	6	6	12
Iron.....mg	0.54		1	0.76	0.81	1.64
Magnesium.....mg	35		1	49	52	106
Phosphorus.....mg	21		1	29	32	64
Potassium.....mg	393		1	550	590	1194
Sodium.....mg	3		1	4	4	9
Vitamins:						
Ascorbic acid.....mg	17.50		1	24.50	26.25	53.18
Thiamin.....mg	0.038		1	0.053	0.057	0.115
Riboflavin.....mg	0.064		1	0.090	0.096	0.194
Niacin.....mg	0.430		1	0.602	0.645	1.307
Vitamin A.....RE	27			38	40	82
.....IU	273		1	382	410	830

(E) 1st common measure: 1 medium, 7 x 2 1/2 inch as purchased, peeled = 140 grams
(F) 2nd common measure: 1 cup, 1/4 inch slices = 150 grams

Crude fiber, lipid, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Banana, Plantain or cooking, Maoli
Musa spp.

Item no. 02-012

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 235 g	150 g	Refuse: 20 % skin stem
	A	B	C	D	E	F	G
Proximate:							
Water.....g	67.17		1	157.85	100.76	243.75
Energy.....kcal	115			270	172	417
.....kJ	481			1130	722	1745
Protein(6.25).....g	0.93		1	2.19	1.40	3.37
Lipid(fat).....g	0.04		1	0.09	0.06	0.15
Carbohydrate.....g	30.87			72.54	46.30	112.02
Fiber.....g	0.31		1	0.73	0.46	1.12
Ash.....g	0.99		1	2.33	1.48	3.59
Minerals:						
Calcium.....mg	4		1	9	6	15
Iron.....mg	0.45		1	1.06	0.68	1.63
Magnesium.....mg	35		1	82	52	127
Phosphorus.....mg	26		1	61	39	94
Potassium.....mg	419		1	985	628	1520
Sodium.....mg	1		1	2	2	4
Vitamins:						
Ascorbic acid.....mg	15.20		1	35.72	22.80	55.16
Thiamin.....mg	0.054		1	0.127	0.081	0.196
Riboflavin.....mg	0.119		1	0.280	0.178	0.432
Niacin.....mg	0.650		1	1.528	0.975	2.359
Vitamin A.....RE	39			92	58	142
.....IU	388		1	912	582	1408

(E) 1st common measure: 1 medium, 7 1/2 x 2 7/8 inch as purchased, peeled = 235 grams
(F) 2nd common measure: 1 cup, 1/4 inch slices = 150 grams

Sodium, potassium, and magnesium values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Banana, Plantain or cooking, Popoulu
Musa spp.

Item no. 02-013

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 12 % skin stem
				240 g	150 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	67.40		1	161.76	101.10	269.04
Energy.....kcal	114			274	171	455
.....kJ	477			1145	716	1904
Protein(6.25).....g	1.16		1	2.78	1.74	4.63
Lipid(fat).....g	0.04		1	0.10	0.06	0.16
Carbohydrate.....g	30.36			72.86	45.54	121.19
Fiber.....g	0.33		1	0.79	0.50	1.32
Ash.....g	1.04		1	2.50	1.56	4.15
Minerals:						
Calcium.....mg	1		1	2	2	4
Iron.....mg	0.30		1	0.72	0.45	1.20
Magnesium.....mg	34		1	82	51	136
Phosphorus.....mg	26		1	62	39	104
Potassium.....mg	496		1	1190	744	1980
Sodium.....mg	1		1	2	2	4
Vitamins:						
Ascorbic acid.....mg	14.50		1	34.80	21.75	57.88
Thiamin.....mg	0.060		1	0.144	0.090	0.240
Riboflavin.....mg	0.071		1	0.170	0.106	0.283
Niacin.....mg	0.660		1	1.584	0.990	2.634
Vitamin A.....RE	71			170	106	283
.....IU	711		1	1706	1066	2838

(E) 1st common measure: 1 medium, 5 5/8 x 2 1/2 inch as purchased, peeled = 240 grams
(F) 2nd common measure: 1 cup, 1/4 inch slices = 150 grams

Vitamins, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Breadfruit, green, raw
Artocarpus communis

Item no. 02-014

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 21 % skin stem core
				185 g	105 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	70.65		1	130.70	74.18	253.17
Energy.....kcal	102			189	107	366
.....kJ	429			794	450	1537
Protein(6.25).....g	0.91		1	1.68	0.96	3.26
Lipid(fat).....g	0.12		1	0.22	0.13	0.43
Carbohydrate.....g	27.34			50.58	28.71	97.97
Fiber.....g	1.90		1	3.52	2.00	6.81
Ash.....g	0.98		1	1.81	1.03	3.51
Minerals:						
Calcium.....mg	20		1	37	21	72
Iron.....mg	0.50		1	0.92	0.52	1.79
Magnesium.....mg	26		1	48	27	93
Phosphorus.....mg	33		1	61	35	118
Potassium.....mg	488		1	903	512	1749
Sodium.....mg	3		1	6	3	11
Vitamins:						
Ascorbic acid.....mg	16.20		1	29.97	17.01	58.05
Thiamin.....mg	0.120		1	0.222	0.126	0.430
Riboflavin.....mg	0.052		1	0.096	0.055	0.186
Niacin.....mg	0.840		1	1.554	0.882	3.010
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1/8 medium, 6 1/2 x 6 1/8 inch diameter as purchased, peeled = 185 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 105 grams

Vitamin values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Breadfruit, green, cooked
Artocarpus communis

Item no. 02-015

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 21 % skin stem core
				175 g	100 g	
	A	B	C	D	E	F	G
Proximate:							
Water.....g	70.40		1	123.20	70.40	252.27
Energy.....kcal	104			182	104	373
.....kJ	435			761	435	1559
Protein(6.25).....g	1.00		1	1.75	1.00	3.58
Lipid(fat).....g	0.08		1	0.14	0.08	0.29
Carbohydrate.....g	27.75			48.56	27.75	99.44
Fiber.....g	1.85		1	3.24	1.85	6.63
Ash.....g	0.77		1	1.35	0.77	2.76
Minerals:						
Calcium.....mg	20		1	35	20	72
Iron.....mg	0.46		1	0.80	0.46	1.65
Magnesium.....mg	29		1	51	29	104
Phosphorus.....mg	37		1	65	37	133
Potassium.....mg	522		1	914	522	1871
Sodium.....mg	2		1	4	2	7
Vitamins:						
Ascorbic acid.....mg	9.50		1	16.62	9.50	34.04
Thiamin.....mg	0.117		1	0.205	0.117	0.419
Riboflavin.....mg	0.056		1	0.098	0.056	0.201
Niacin.....mg	0.640		1	1.120	0.640	2.293
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1/8 medium, 6 1/2 x 6 1/8 inch diameter as purchased, peeled = 175 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 100 grams

Vitamin values are from different sample lots and have been adjusted to the moisture content shown.

Breadfruit, ripe, raw
Artocarpus communis

Item no. 02-016

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 15 % skin core
				125 g	250 g	
	A	B	C	D	E	F	G
Proximate:							
Water.....g	61.77		1	77.21	154.42	238.16
Energy.....kcal	134			168	335	517
.....kJ	561			701	1402	2163
Protein(6.25).....g	0.07		1	0.09	0.18	0.27
Lipid(fat).....g	0.18		1	0.22	0.45	0.69
Carbohydrate.....g	36.77			45.96	91.92	141.77
Fiber.....g	1.45		1	1.81	3.62	5.59
Ash.....g	1.21		1	1.51	3.02	4.67
Minerals:						
Calcium.....mg	21		1	26	52	81
Iron.....mg	0.26		1	0.32	0.65	1.00
Magnesium.....mg	45		1	56	112	174
Phosphorus.....mg	48		1	60	120	185
Potassium.....mg	551		1	689	1378	2124
Sodium.....mg	13		1	16	32	50
Vitamins:						
Ascorbic acid.....mg	20.50		1	25.62	51.25	79.04
Thiamin.....mg	0.116		1	0.145	0.290	0.447
Riboflavin.....mg	0.063		1	0.079	0.158	0.243
Niacin.....mg	1.540		1	1.925	3.850	5.938
Vitamin A.....RE	4			5	10	15
.....IU	41		1	51	102	158

(E) 1st common measure: 1/8 medium, 6 7/8 x 5 inch diameter as purchased, peeled = 125 grams
(F) 2nd common measure: 1 cup, pulp = 250 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Cactus fruit
Opuntia megacantha

Item no. 02-017

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 25 % skin seeds ends
				145 g	95 g	
	B	C	D	E	F	G
Proximate:						
Water.....g	84.61		1	122.68	80.38	287.84
Energy.....kcal	53			77	50	180
.....kJ	222			322	211	755
Protein(6.25).....g	0.79		1	1.15	0.75	2.69
Lipid(fat).....g	0.09		1	0.13	0.09	0.31
Carbohydrate.....g	13.76			19.95	13.07	46.81
Fiber.....g	1.94		1	2.81	1.84	6.60
Ash.....g	0.75		1	1.09	0.71	2.55
Minerals:						
Calcium.....mg	43		1	62	41	146
Iron.....mg	0.26		1	0.38	0.25	0.88
Magnesium.....mg	37		1	54	35	126
Phosphorus.....mg	9		1	13	9	31
Potassium.....mg	228		1	331	217	776
Sodium.....mg	2		1	3	2	7
Vitamins:						
Ascorbic acid.....mg	25.40		1	36.83	24.13	86.41
Thiamin.....mg	0.015		1	0.022	0.014	0.051
Riboflavin.....mg	0.026		1	0.038	0.025	0.088
Niacin.....mg	0.360		1	0.522	0.342	1.225
Vitamin A.....RE	0			0	0	0
.....IU	0			0	0	0

(E) 1st common measure: 1 medium, 3 1/4 x 2 3/8 inch as purchased, peeled = 145 grams
(F) 2nd common measure: 1 small, 3 5/8 x 2 1/8 inch as purchased, peeled = 95 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Carambola
Averrhoa carambola

Item no. 02-018

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 6 % membranes seeds
				195 g	135 g	
	B	C	D	E	F	G
Proximate:						
Water.....g	90.23		1	175.95	121.81	384.73
Energy.....kcal	37			72	50	158
.....kJ	155			302	209	661
Protein(6.25).....g	0.85		1	1.66	1.15	3.62
Lipid(fat).....g	0.90		1	1.76	1.22	3.84
Carbohydrate.....g	7.52			14.66	10.15	32.06
Fiber.....g	1.47		1	2.87	1.98	6.27
Ash.....g	0.50		1	0.98	0.68	2.13
Minerals:						
Calcium.....mg	1		1	2	1	4
Iron.....mg	0.06		1	0.12	0.08	0.26
Magnesium.....mg	9		1	18	12	38
Phosphorus.....mg	11		1	21	15	47
Potassium.....mg	145		1	283	196	618
Sodium.....mg	2		1	4	3	9
Vitamins:						
Ascorbic acid.....mg	35.00		1	68.25	47.25	149.23
Thiamin.....mg	0.040		1	0.078	0.054	0.171
Riboflavin.....mg	0.044		1	0.086	0.059	0.188
Niacin.....mg	0.710		1	1.384	0.958	3.027
Vitamin A.....RE	2			4	3	9
.....IU	21		1	41	28	90

(E) 1st common measure: 1 medium, 5 x 3 inch as purchased, seeds removed = 195 grams
(F) 2nd common measure: 1 cup, 3/4 inch cubes = 135 grams

Proximate composition, sodium, potassium, magnesium, and ascorbic acid values are from different sample lots and have been adjusted to the moisture content shown. Calcium, phosphorus, and iron values were determined on juice; other nutrients on pulp.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Carissa
Carissa grandiflora

Item no. 02-019

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 13 g	150 g	Amount in edible portion of 1 pound food as purchased: Refuse: 7 % seeds
A	B	C	D	E	F	G
Proximate:						
Water.....g	81.88		1	10.64	122.82	345.41
Energy.....kcal	68			9	102	287
.....kJ	285			37	428	1202
Protein(6.25).....g	0.36		1	0.05	0.54	1.52
Lipid(fat).....g	0.87		1	0.11	1.30	3.67
Carbohydrate.....g	16.45			2.14	24.68	69.39
Fiber.....g	0.77		1	0.10	1.16	3.25
Ash.....g	0.44		1	0.06	0.66	1.86
Minerals:						
Calcium.....mg	11		1	1	16	46
Iron.....mg	1.31		1	0.17	1.96	5.53
Magnesium.....mg	14		1	2	21	59
Phosphorus.....mg	7		1	1	10	30
Potassium.....mg	255		1	33	382	1076
Sodium.....mg	5		1	1	8	21
Vitamins:						
Ascorbic acid.....mg	55.50		1	7.22	83.25	234.13
Thiamin.....mg	0.037		1	0.005	0.056	0.156
Riboflavin.....mg	0.063		1	0.008	0.094	0.266
Niacin.....mg	0.240		1	0.031	0.360	1.012
Vitamin A.....RE	2			0	3	8
.....IU	24		1	3	36	101

(E) 1st common measure: 1 medium, 1 1/2 x 1 1/8 inch as purchased, seeds removed = 13 grams
(F) 2nd common measure: 1 cup, 1/8 inch slices = 150 grams

Vitamin values are from a different sample lot and have been adjusted to the moisture content shown.

Cherimoya
Annona cherimola

Item no. 02-020

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 550 g	250 g	Amount in edible portion of 1 pound food as purchased: Refuse: 35 % skin seeds
A	B	C	D	E	F	G
Proximate:						
Water.....g	68.71		1	377.90	171.78	202.58
Energy.....kcal	110			605	275	324
.....kJ	460			2530	1150	1356
Protein(6.25).....g	1.54		1	8.47	3.85	4.54
Lipid(fat).....g	0.13		1	0.72	0.32	0.38
Carbohydrate.....g	28.95			159.22	72.38	85.36
Fiber.....g						
Ash.....g	0.67		1	3.68	1.68	1.98
Minerals:						
Calcium.....mg	9		1	50	22	27
Iron.....mg	0.25		1	1.38	0.62	0.74
Magnesium.....mg						
Phosphorus.....mg	24		1	132	60	71
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	12.20		1	67.10	30.50	35.97
Thiamin.....mg	0.112		1	0.616	0.280	0.330
Riboflavin.....mg	0.112		1	0.616	0.280	0.330
Niacin.....mg	1.020		1	5.610	2.550	3.007
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 large, 5 x 3 7/8 inch as purchased, peeled and pitted = 550 grams
(F) 2nd common measure: 1 cup, pulp = 250 grams

Lipid value is from a different sample lot and has been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Cherry seed, semi-dried, sweet and sour
Prunus pseudocerasus

Item no. 02-021

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 40 % seed
				5 g	60 g	
	A	B	C	D	E	F	G
Proximate:							
Water.....g	33.04		1	1.65	19.82	89.92
Energy.....kcal	208			10	125	566
.....kJ	870			44	522	2368
Protein(6.25).....g	2.10		1	0.10	1.26	5.72
Lipid(fat).....g	1.16		1	0.06	0.70	3.16
Carbohydrate.....g	53.12			2.66	31.87	144.57
Fiber.....g	4.05		1	0.20	2.43	11.02
Ash.....g	10.58		1	0.53	6.35	28.79
Minerals:						
Calcium.....mg	224		1	11	134	610
Iron.....mg	24.82		1	1.24	14.89	67.55
Magnesium.....mg	42		1	2	25	114
Phosphorus.....mg	25		1	1	15	68
Potassium.....mg	141		1	7	85	384
Sodium.....mg	3721		1	186	2233	10127
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium, 3/4 x 11/16 x 1/4 inch as purchased, pitted = 5 grams
(F) 2nd common measure: 1 package, 3 1/2 ounces as purchased, pitted = 60 grams

Coconut, mature
Cocos nucifera

Item no. 02-022

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 45 % shell water
				380 g	100 g	
	A	B	C	D	E	F	G
Proximate:						
Water.....g	38.80		1	147.44	38.80	96.80
Energy.....kcal	421			1600	421	1050
.....kJ	1761			6692	1761	4393
Protein(6.25).....g	3.60		1	13.68	3.60	8.98
Lipid(fat).....g	41.54		1	157.85	41.54	103.63
Carbohydrate.....g	14.99		1	56.96	14.99	37.40
Fiber.....g	3.47		1	13.19	3.47	8.66
Ash.....g	1.07		1	4.07	1.07	2.67
Minerals:						
Calcium.....mg	17		1	65	17	42
Iron.....mg	1.95		1	7.41	1.95	4.86
Magnesium.....mg	30		1	114	30	75
Phosphorus.....mg	95		1	361	95	237
Potassium.....mg	344		1	1307	344	858
Sodium.....mg	20		1	76	20	50
Vitamins:						
Ascorbic acid.....mg	3.80		1	14.44	3.80	9.48
Thiamin.....mg	0.058		1	0.220	0.058	0.145
Riboflavin.....mg	0.013		1	0.049	0.013	0.032
Niacin.....mg	0.620		1	2.356	0.620	1.547
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 4 1/4 x 4 1/2 inch as purchased, shell removed = 380 grams
(F) 2nd common measure: 1 cup, grated, lightly packed = 100 grams

Sodium, potassium, and magnesium values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Coconut cream, frozen
Cocos nucifera

Item no. 02-023

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				120 g	360 g	
Proximate:						
Water.....g	71.42		1	85.70	257.11	323.96
Energy.....kcal	202			242	727	916
.....kJ	845			1014	3042	3833
Protein(6.25).....g	1.90		1	2.28	6.84	8.62
Lipid(fat).....g	20.80		1	24.96	74.88	94.35
Carbohydrate.....g	5.29			6.35	19.04	24.00
Fiber.....g	0		1	0	0	0
Ash.....g	0.59		1	0.71	2.12	2.68
Minerals:						
Calcium.....mg	4		1	5	14	18
Iron.....mg	0.81		1	0.97	2.92	3.67
Magnesium.....mg	32		1	38	115	145
Phosphorus.....mg	59		1	71	212	268
Potassium.....mg	232		1	278	835	1052
Sodium.....mg	12		1	14	43	54
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1/2 cup = 120 grams
(F) 2nd common measure: 1 can, 12 fluid ounces = 360 grams

Coconut cream, prepared with water
Cocos nucifera

Item no. 02-024

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 75 % shell water residue
				115 g	230 g	
Proximate:						
Water.....g	65.70		1	75.56	151.11	74.50
Energy.....kcal	240			276	552	272
.....kJ	1004			1155	2309	1139
Protein(6.25).....g	3.21		1	3.69	7.38	3.64
Lipid(fat).....g	24.88		1	28.61	57.22	28.21
Carbohydrate.....g	5.18			5.96	11.91	5.87
Fiber.....g	0		1	0	0	0
Ash.....g	1.03		1	1.18	2.37	1.17
Minerals:						
Calcium.....mg	16		1	18	37	18
Iron.....mg	1.64		1	1.89	3.77	1.86
Magnesium.....mg	34		1	39	78	39
Phosphorus.....mg	100		1	115	230	113
Potassium.....mg	333		1	383	766	378
Sodium.....mg	14		1	16	32	16
Vitamins:						
Ascorbic acid.....mg	2.80		1	3.22	6.44	3.18
Thiamin.....mg	0.026		1	0.030	0.060	0.029
Riboflavin.....mg	0		1	0	0	0
Niacin.....mg	0.760		1	0.874	1.748	0.862
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1/2 cup = 115 grams
(F) 2nd common measure: 1 cup = 230 grams

Sodium, postassium, and magnesium values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Coconut cream, prepared without water
Cocos nucifera

Item no. 02-025

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 115 g	230 g	Refuse: 75 % shell water residue
A	B	C	D	E	F	G
Proximate:						
Water.....g	53.90		1	61.98	123.97	61.12
Energy.....kcal	330			380	759	374
.....kJ	1381			1588	3176	1566
Protein(6.25).....g	4.28		1	4.92	9.84	4.85
Lipid(fat).....g	34.68		1	39.88	79.76	39.33
Carbohydrate.....g	5.99			6.89	13.78	6.79
Fiber.....g	0		1	0	0	0
Ash.....g	1.15		1	1.32	2.64	1.30
Minerals:						
Calcium.....mg	11		1	13	25	12
Iron.....mg	2.28		1	2.62	5.24	2.59
Magnesium.....mg						
Phosphorus.....mg	122		1	140	281	138
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	2.80		1	3.22	6.44	3.18
Thiamin.....mg	0.030		1	0.034	0.069	0.034
Riboflavin.....mg	0		1	0	0	0
Niacin.....mg	0.890		1	1.024	2.047	1.009
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1/2 cup = 115 grams
(F) 2nd common measure: 1 cup = 230 grams

Coconut water
Cocos nucifera

Item no. 02-026

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 150 g	240 g	Refuse: 59 % shell flesh
A	B	C	D	E	F	G
Proximate:						
Water.....g	93.78		1	140.67	225.07	174.41
Energy.....kcal	24			36	58	45
.....kJ	100			150	240	186
Protein(6.25).....g	0.13		1	0.20	0.31	0.24
Lipid(fat).....g	0.14		1	0.21	0.34	0.26
Carbohydrate.....g	5.54			8.31	13.30	10.30
Fiber.....g	0		1	0	0	0
Ash.....g	0.41		1	0.62	0.98	0.76
Minerals:						
Calcium.....mg	16		1	24	38	30
Iron.....mg	0.07		1	0.10	0.17	0.13
Magnesium.....mg	10		1	15	24	19
Phosphorus.....mg	14		1	21	34	26
Potassium.....mg	214		1	321	514	398
Sodium.....mg	9		1	14	22	17
Vitamins:						
Ascorbic acid.....mg	1.50	0.06	3	2.25	3.60	2.79
Thiamin.....mg	0		1	0	0	0
Riboflavin.....mg	0		1	0	0	0
Niacin.....mg	0		1	0	0	0
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 small, 4 1/2 x 4 1/2 inch as purchased = 150 grams
(F) 2nd common measure: 1 cup = 240 grams

Protein, lipid, sodium, potassium, magnesium, and ascorbic acid values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Dragon eye or longan, dried
Euphoria longan

Item no. 02-027

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 61 % seed shell
				8 g	90 g	
Proximate:						
Water.....g	19.52		1	1.56	17.57	34.53
Energy.....kcal	286			23	257	506
.....kJ	1196			96	1076	2116
Protein(6.25).....g	4.49		1	0.36	4.04	7.94
Lipid(fat).....g	1.26		1	0.10	1.13	2.23
Carbohydrate.....g	72.31			5.78	65.08	127.92
Fiber.....g	0.96		1	0.08	0.86	1.70
Ash.....g	2.42		1	0.19	2.18	4.28
Minerals:						
Calcium.....mg	21		1	2	19	37
Iron.....mg	1.02		1	0.08	0.92	1.80
Magnesium.....mg	41		1	3	37	73
Phosphorus.....mg	126		1	10	113	223
Potassium.....mg	1310		1	105	1179	2317
Sodium.....mg	5		1	0	4	9
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium, 1 x 1 inch as purchased, pit and shell removed = 8 grams
(F) 2nd common measure: 1 package, 8 ounces as purchased, pit and shell removed = 90 grams

Fig
Ficus carica

Item no. 02-028

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 1 % stem end
				50 g	70 g	
Proximate:						
Water.....g	85.73		1	42.86	60.01	384.98
Energy.....kcal	51			26	36	229
.....kJ	213			106	149	957
Protein(6.25).....g	0.69		1	0.34	0.48	3.10
Lipid(fat).....g	0.21		1	0.10	0.15	0.94
Carbohydrate.....g	12.96			6.48	9.07	58.20
Fiber.....g	0.89		1	0.44	0.62	4.00
Ash.....g	0.41		1	0.20	0.29	1.84
Minerals:						
Calcium.....mg	28		1	14	20	126
Iron.....mg	0.16		1	0.08	0.11	0.72
Magnesium.....mg	16		1	8	11	72
Phosphorus.....mg	21		1	10	15	94
Potassium.....mg	188		1	94	132	844
Sodium.....mg	3		1	2	2	13
Vitamins:						
Ascorbic acid.....mg	2.00		1	1.00	1.40	8.98
Thiamin.....mg	0.036		1	0.018	0.025	0.162
Riboflavin.....mg	0.039		1	0.020	0.027	0.175
Niacin.....mg	0.340		1	0.170	0.238	1.527
Vitamin A.....RE	6			3	4	27
.....IU	65		1	32	46	292

(E) 1st common measure: 1 medium, 2 1/4 x 2 inch as purchased = 50 grams
(F) 2nd common measure: 1 large, 2 1/2 x 2 1/4 inch as purchased = 70 grams

Vitamin, sodium, potassium and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Fruit punch base, frozen — Item no. 02-029

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 140 g	420 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	48.89		1	68.45	205.34	221.77
Energy.....kcal	200			280	840	907
.....kJ	837			1172	3515	3797
Protein(6.25).....g	0.16		1	0.22	0.67	0.73
Lipid(fat).....g	0.05		1	0.07	0.21	0.23
Carbohydrate.....g	50.77			71.08	213.23	230.29
Fiber.....g	0.24		1	0.34	1.01	1.09
Ash.....g	0.13		1	0.18	0.55	0.59
Minerals:						
Calcium.....mg	6		1	8	25	27
Iron.....mg	0.18		1	0.25	0.76	0.82
Magnesium.....mg	6		1	8	25	27
Phosphorus.....mg	4		1	6	17	18
Potassium.....mg	50		1	70	210	227
Sodium.....mg	6		1	8	25	27
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1/2 cup, base = 140 grams
(F) 2nd common measure: 1 can, 12 fluid ounces, base = 420 grams

Fruit punch concentrate, Hawaiian, frozen — Item no. 02-030

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 150 g	225 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	46.78		1	70.17	105.26	212.19
Energy.....kcal	208			312	468	943
.....kJ	870			1305	1958	3946
Protein(6.25).....g	0.26		1	0.39	0.58	1.18
Lipid(fat).....g	0.09		1	0.14	0.20	0.41
Carbohydrate.....g	52.70			79.05	118.58	239.05
Fiber.....g	0.06		1	0.09	0.14	0.27
Ash.....g	0.17		1	0.26	0.38	0.77
Minerals:						
Calcium.....mg	6		1	9	14	27
Iron.....mg	0.20		1	0.30	0.45	0.91
Magnesium.....mg	6			9	14	27
Phosphorus.....mg	5		1	8	11	23
Potassium.....mg	72		1	108	162	327
Sodium.....mg	11		1	16	25	50
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg	0.036		1	0.054	0.081	0.163
Riboflavin.....mg	0.030		1	0.045	0.068	0.136
Niacin.....mg	0.730		1	1.095	1.642	3.311
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1/2 cup, concentrate = 150 grams
(F) 2nd common measure: 1 can, 6 fluid ounces, concentrate = 225 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Fruit punch syrup, imitation — Item no. 02-031

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 150 g	1200 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
Proximate:						
Water.....g	48.98		1	73.47	587.76	222.17
Energy.....kcal	200			300	2400	907
.....kJ	837			1256	44	3797
Protein(6.25).....g	0.15		1	0.22	1.80	0.68
Lipid(fat).....g	0.10		1	0.15	1.20	0.45
Carbohydrate.....g	50.72			76.08	608.64	230.07
Fiber.....g	0		1	0	0	0
Ash.....g	0.05		1	0.08	0.60	0.23
Minerals:						
Calcium.....mg	3		1	4	36	14
Iron.....mg	0.04		1	0.06	0.48	0.18
Magnesium.....mg	1		1	2	12	5
Phosphorus.....mg	0		1	0	0	0
Potassium.....mg	10		1	15	120	45
Sodium.....mg	17		1	26	204	77
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1/2 cup, syrup = 150 grams
(F) 2nd common measure: 1 quart, syrup = 1200 grams

Ginger, semi-dried, salted
Zingiber officinale — Item no. 02-032

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 14 g	195 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
Proximate:						
Water.....g	31.02		1	4.34	60.49	140.71
Energy.....kcal	149			21	291	676
.....kJ	623			87	1215	2826
Protein(6.25).....g	1.62		1	0.23	3.16	7.35
Lipid(fat).....g	0.77		1	0.11	1.50	3.49
Carbohydrate.....g	36.05			5.05	70.30	163.52
Fiber.....g	2.90		1	0.41	5.66	13.15
Ash.....g	30.54		1	4.28	59.55	138.53
Minerals:						
Calcium.....mg	216		1	30	421	980
Iron.....mg	5.59		1	0.78	10.90	25.36
Magnesium.....mg	78		1	11	152	354
Phosphorus.....mg	18		1	3	35	82
Potassium.....mg	200		1	28	390	907
Sodium.....mg	1022		1	1543	1493	49996
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium slices, 1 3/8 x 1 x 3/16 inch as purchased = 14 grams
(F) 2nd common measure: 1 package, 7 ounces as purchased = 195 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Grape, Isabella
Vitis labrusca x V. vinifera

Item no. 02-033

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 90 g	250 g	Refuse: 44 % skin seeds stem
	A	B	C	D	E	F	G
Proximate:							
Water.....g	82.25		1	74.02	205.62	208.93
Energy.....kcal	64			58	160	163
.....kJ	268			241	670	681
Protein(6.25).....g	0.45		1	0.40	1.12	1.14
Lipid(fat).....g	0.19		1	0.17	0.48	0.48
Carbohydrate.....g	16.90			15.21	42.25	42.93
Fiber.....g	0.20		1	0.18	0.50	0.51
Ash.....g	0.21		1	0.19	0.52	0.53
Minerals:						
Calcium.....mg	8		1	7	20	20
Iron.....mg	0.22		1	0.20	0.55	0.56
Magnesium.....mg	5		1	4	12	13
Phosphorus.....mg	16		1	14	40	41
Potassium.....mg	116		1	104	290	295
Sodium.....mg	8		1	7	20	20
Vitamins:						
Ascorbic acid.....mg	2.00		1	1.80	5.00	5.08
Thiamin.....mg	0.075		1	0.068	0.188	0.191
Riboflavin.....mg	0.049		1	0.044	0.122	0.124
Niacin.....mg	10.190		1	9.171	25.475	25.884
Vitamin A.....RE	10			9	25	25
.....IU	104		1	94	260	264

(E) 1st common measure: 1 cup, whole as purchased, skin and seeds removed = 90 grams
(F) 2nd common measure: 1 cup, pulp, skin and seeds removed = 250 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Grapefruit
Citrus paradisi

Item no. 02-034

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 135 g	200 g	Refuse: 35 % skin membranes seeds
	A	B	C	D	E	F	G
Proximate:							
Water.....g	91.56		1	123.61	183.12	269.96
Energy.....kcal	31			42	62	91
.....kJ	130			176	260	383
Protein(6.25).....g	0.55		1	0.74	1.10	1.62
Lipid(fat).....g	0.30		1	0.40	0.60	0.88
Carbohydrate.....g	7.32			9.88	14.64	21.58
Fiber.....g	0.31		1	0.42	0.62	0.91
Ash.....g	0.27		1	0.36	0.54	0.80
Minerals:						
Calcium.....mg	22		1	30	44	65
Iron.....mg	0.09		1	0.12	0.18	0.27
Magnesium.....mg	7		1	9	14	21
Phosphorus.....mg	17		1	23	34	50
Potassium.....mg	103		1	139	206	304
Sodium.....mg	5		1	7	10	15
Vitamins:						
Ascorbic acid.....mg	53.90		1	72.76	107.80	158.92
Thiamin.....mg	0.052		1	0.070	0.104	0.153
Riboflavin.....mg	0.025		1	0.034	0.050	0.074
Niacin.....mg	0.250		1	0.338	0.500	0.737
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 2 3/4 x 3 1/2 inch as purchased, peeled, membrane removed = 135 grams
(F) 2nd common measure: 1 cup, sections, membranes removed = 200 grams

Sodium, potassium, and iron values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Green sapote
Calocarpum viride

Item no. 02-035

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 225 g	250 g	Amount in edible portion of 1 pound food as purchased: Refuse: 31 % seeds skin membranes
Proximate:						
Water.....g	69.76		1	156.96	174.40	218.34
Energy.....kcal	107			241	268	335
.....kJ	448			1008	1120	1402
Protein(6.25).....g	1.73		1	3.89	4.32	5.41
Lipid(fat).....g	0.47		1	1.06	1.18	1.47
Carbohydrate.....g	26.96			60.66	67.40	84.38
Fiber.....g	0.11		1	0.25	0.28	0.34
Ash.....g	1.08		1	2.43	2.70	3.38
Minerals:						
Calcium.....mg	35		1	79	88	110
Iron.....mg	0.42		1	0.94	1.05	1.31
Magnesium.....mg	22		1	50	55	69
Phosphorus.....mg	20		1	45	50	63
Potassium.....mg	512		1	1152	1280	1602
Sodium.....mg	14		1	32	35	44
Vitamins:						
Ascorbic acid.....mg	29.20		1	65.70	73.00	91.39
Thiamin.....mg	0		1	0	0	0
Riboflavin.....mg	0.051		1	0.115	0.128	0.160
Niacin.....mg	1.570		1	3.532	3.925	4.914
Vitamin A.....RE	73			164	182	228
.....IU	730		1	1642	1825	2285

(E) 1st common measure: 1 medium, 4 x 3 3/4 inch as purchased, peeled and seeds removed = 225 grams
(F) 2nd common measure: 1 cup, pulp = 250 grams

Sodium, potassium, and magnesium values are from a different sample lot and have been adjusted to the moisture content shown.

Guava, Cattley, red, seeds removed
Psidium cattleianum

Item no. 02-036

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 5 g	245 g	Amount in edible portion of 1 pound food as purchased: Refuse: 16 % seeds blossom and stem ends
Proximate:						
Water.....g	78.32		1	3.92	191.88	298.42
Energy.....kcal	77			4	189	293
.....kJ	322			16	789	1227
Protein(6.25).....g	0.45		1	0.02	1.10	1.71
Lipid(fat).....g	0.28		1	0.01	0.69	1.07
Carbohydrate.....g	20.28			1.01	49.69	77.27
Fiber.....g	4.16		1	0.21	10.19	15.85
Ash.....g	0.67		1	0.03	1.64	2.55
Minerals:						
Calcium.....mg	22		1	1	54	84
Iron.....mg	0.38		1	0.02	0.93	1.45
Magnesium.....mg	17		1	1	42	65
Phosphorus.....mg	6		1	0	15	23
Potassium.....mg	292		1	15	715	1113
Sodium.....mg	36		1	2	88	137
Vitamins:						
Ascorbic acid.....mg	33.00		1	1.65	80.85	125.74
Thiamin.....mg	0.047		1	0.002	0.115	0.179
Riboflavin.....mg	0.040		1	0.002	0.098	0.152
Niacin.....mg	0.880		1	0.044	2.156	3.353
Vitamin A.....RE	20			1	49	76
.....IU	200		1	10	490	762

(E) 1st common measure: 1 medium, 1 x 7/8 inch as purchased = 5 grams
(F) 2nd common measure: 1 cup, pulp and shell = 245 grams

Vitamin, ash, calcium, phosphorus, and iron values are from different sample lots and have been adjusted to the moisture content shown. Moisture content not determined on lot used for ascorbic acid value.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Guava, common, seeds removed
Psidium guajava

Item no. 02-037

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 140 g	245 g	Refuse: 14 % seeds blossom and stem ends
Proximate:						
Water.....g	84.35		1	118.09	206.66	329.05
Energy.....kcal	55			77	135	215
.....kJ	230			322	564	897
Protein(6.25).....g	0.28		1	0.39	0.69	1.09
Lipid(fat).....g	0.10		1	0.14	0.24	0.39
Carbohydrate.....g	14.79			20.71	36.24	57.70
Fiber.....g	2.38		1	3.33	5.83	9.28
Ash.....g	0.48		1	0.67	1.18	1.87
Minerals:						
Calcium.....mg	15		1	21	37	59
Iron.....mg	0.29		1	0.41	0.71	1.13
Magnesium.....mg	10		1	14	24	39
Phosphorus.....mg	16		1	22	39	62
Potassium.....mg	292		1	409	715	1139
Sodium.....mg	6		1	8	15	23
Vitamins:						
Ascorbic acid.....mg	190.00	35.18	8	266.00	465.50	741.18
Thiamin.....mg	0.056	0.002	3	0.078	0.137	0.218
Riboflavin.....mg	0.060	0.004	3	0.084	0.147	0.234
Niacin.....mg	1.280	0.134	3	1.792	3.136	4.993
Vitamin A.....RE	11			15	27	43
.....IU	109	149	3	153	267	425

(E) 1st common measure: 1 medium, 3 x 2 1/2 inch as purchased = 140 grams
(F) 2nd common measure: 1 cup, pulp and shell = 245 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown. Vitamin values are for mixed seedling types; vitamin A value varies with color; ascorbic acid values range from 100 to 350 mg.

Guava, common, whole
Psidium guajava

Item no. 02-038

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 165 g	240 g	Refuse: 2 % blossom and stem ends
Proximate:						
Water.....g	81.75		1	134.89	196.20	363.40
Energy.....kcal	65			107	156	289
.....kJ	272			449	653	1209
Protein(6.25).....g	0.75		1	1.24	1.80	3.33
Lipid(fat).....g	0.24		1	0.40	0.58	1.07
Carbohydrate.....g	16.76			27.65	40.22	74.50
Fiber.....g	6.84		1	11.29	16.42	30.41
Ash.....g	0.50		1	0.82	1.20	2.22
Minerals:						
Calcium.....mg	10		1	16	24	44
Iron.....mg	1.49		1	2.46	3.58	6.62
Magnesium.....mg						
Phosphorus.....mg	22		1	36	53	98
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	210.00		100	346.50	504.00	933.51
Thiamin.....mg	0.037		1	0.061	0.089	0.164
Riboflavin.....mg	0.053		1	0.087	0.127	0.236
Niacin.....mg	0.610		1	1.006	1.464	2.712
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 medium, 3 x 2 1/2 inch as purchased = 165 grams
(F) 2nd common measure: 1 cup, pulp and shell = 240 grams

Vitamin values are from different sample lots and have been adjusted to the moisture content shown. Vitamin A value varies with color; ascorbic acid value in 100 samples ranges from 70 to 350.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Guava, extract, homemade
Psidium guajava

Item no. 02-039

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 235 g	940 g	Amount in edible portion of 1 pound food as purchased: Refuse: 36 % pulp
Proximate:						
Water.....g	95.76		1	225.04	900.14	278.00
Energy.....kcal	14			33	132	41
.....kJ	60			141	564	174
Protein(6.25).....g	0.08		1	0.19	0.75	0.23
Lipid(fat).....g	0.08		1	0.19	0.75	0.23
Carbohydrate.....g	3.71			8.72	34.87	10.77
Fiber.....g						
Ash.....g	0.37		1	0.87	3.48	1.07
Minerals:						
Calcium.....mg	5		1	12	47	15
Iron.....mg	1.18		1	2.77	11.09	3.43
Magnesium.....mg	6		1	14	56	17
Phosphorus.....mg	6		1	14	56	17
Potassium.....mg	168		1	395	1579	488
Sodium.....mg	4		1	9	38	12
Vitamins:						
Ascorbic acid.....mg	73.50		1	172.72	690.90	213.37
Thiamin.....mg	0.024		1	0.056	0.226	0.070
Riboflavin.....mg	0.020		1	0.047	0.188	0.058
Niacin.....mg	0.640		1	1.504	6.016	1.858
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 cup = 235 grams
(F) 2nd common measure: 1 quart = 940 grams

Guava, nectar, frozen, reconstituted
Psidium guajava

Item no. 02-040

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 250 g	1000 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
Proximate:						
Water.....g	90.15		1	225.38	901.50	408.92
Energy.....kcal	36			90	360	163
.....kJ	149			372	1490	676
Protein(6.25).....g	0.08		2	0.20	0.80	0.36
Lipid(fat).....g	0.08		2	0.20	0.80	0.36
Carbohydrate.....g	9.64			24.10	96.40	43.73
Fiber.....g	0.26		2	0.65	2.60	1.18
Ash.....g	0.08		2	0.20	0.80	0.36
Minerals:						
Calcium.....mg	2		1	5	20	9
Iron.....mg	0.04		1	0.10	0.40	0.18
Magnesium.....mg	2		1	5	20	9
Phosphorus.....mg	2		1	5	20	9
Potassium.....mg	18		1	45	180	82
Sodium.....mg	3		1	8	30	14
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup = 250 grams
(F) 2nd common measure: 1 quart = 1000 grams

Proximate values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Guava, nectar, canned
Psidium guajava

Item no. 02-041

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 350 g	235 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	88.69		1	310.42	208.42	402.30
Energy.....kcal	45			158	106	204
.....kJ	189			662	444	857
Protein(6.25).....g	0.05		1	0.18	0.12	0.23
Lipid(fat).....g	0.27		1	0.94	0.63	1.22
Carbohydrate.....g	10.93			38.26	25.69	49.58
Fiber.....g	0.06		1	0.21	0.14	0.27
Ash.....g	0.06		1	0.21	0.14	0.27
Minerals:						
Calcium.....mg	3		1	10	7	14
Iron.....mg	0.15		1	0.52	0.35	0.68
Magnesium.....mg	2		1	7	5	9
Phosphorus.....mg	2		1	7	5	9
Potassium.....mg	17		1	60	40	77
Sodium.....mg	3		1	10	7	14
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 can, 12 fluid ounces = 350 grams
(F) 2nd common measure: 1 cup = 235 grams

Guava, nectar base, frozen
Psidium guajava

Item no. 02-042

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 140 g	210 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	54.88		1	76.83	115.25	248.94
Energy.....kcal	176			246	370	798
.....kJ	737			1032	1548	3343
Protein(6.25).....g	0.19		1	0.27	0.40	0.86
Lipid(fat).....g	0.09		1	0.13	0.19	0.41
Carbohydrate.....g	44.56			62.38	93.58	202.12
Fiber.....g	1.07		1	1.50	2.25	4.85
Ash.....g	0.28		1	0.39	0.59	1.27
Minerals:						
Calcium.....mg	5		1	7	10	23
Iron.....mg	1.01		1	1.41	2.12	4.58
Magnesium.....mg	5		1	7	10	23
Phosphorus.....mg	7		1	10	15	32
Potassium.....mg	129	4	3	181	271	585
Sodium.....mg	3	1	3	4	6	14
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1/2 cup, base = 140 grams
(F) 2nd common measure: 1 can, 6 fluid ounces, base = 210 grams

Potassium and sodium values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Guava, jelly
Psidium guajava

Item no. 02-043

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				20 g	75 g	
Proximate:						
Water.....g	24.56		1	4.91	18.42	111.40
Energy.....kcal	271			54	203	1229
.....kJ	1136			227	852	5153
Protein(6.25).....g	0.04		1	0.01	0.03	0.18
Lipid(fat).....g	0.02		1	0.00	0.02	0.09
Carbohydrate.....g	75.31			15.06	56.48	341.61
Fiber.....g						
Ash.....g	0.07		1	0.01	0.05	0.32
Minerals:						
Calcium.....mg	5		1	1	4	23
Iron.....mg	0.44		1	0.09	0.33	2.00
Magnesium.....mg	4		1	1	3	18
Phosphorus.....mg	4		1	1	3	18
Potassium.....mg	58		1	12	44	263
Sodium.....mg	5		1	1	4	23
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 tablespoon = 20 grams
(F) 2nd common measure: 1/4 cup = 75 grams

Guava, sauce, homemade
Psidium guajava

Item no. 02-044

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 15 % seeds blossom and stem ends
				60 g	240 g	
Proximate:						
Water.....g	89.56		1	53.74	214.94	345.31
Energy.....kcal	36			22	86	139
.....kJ	149			89	358	574
Protein(6.25).....g	0.32		1	0.19	0.77	1.23
Lipid(fat).....g	0.14		1	0.08	0.34	0.54
Carbohydrate.....g	9.48			5.69	22.75	36.55
Fiber.....g	1.99		1	1.19	4.78	7.67
Ash.....g	0.50		1	0.30	1.20	1.93
Minerals:						
Calcium.....mg	7		1	4	17	27
Iron.....mg	0.18		1	0.11	0.43	0.69
Magnesium.....mg	7		1	4	17	27
Phosphorus.....mg	11		1	7	26	42
Potassium.....mg	225		1	135	540	868
Sodium.....mg	4		1	2	10	15
Vitamins:						
Ascorbic acid.....mg	146.40		1	87.84	351.36	564.46
Thiamin.....mg	0.026		1	0.016	0.062	0.100
Riboflavin.....mg	0.013		1	0.008	0.031	0.050
Niacin.....mg	0.420		1	0.252	1.008	1.619
Vitamin A.....RE	17			10	41	66
.....IU	170		1	102	408	655

(E) 1st common measure: 4 tablespoons = 60 grams
(F) 2nd common measure: 1 cup = 240 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Java plum
Eugenia cuminii

Item no. 02-045

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 18 % seed
				9 g	135 g	
Proximate:						
Water.....g	84.76		1	7.63	114.43	315.27
Energy.....kcal	54			5	73	201
.....kJ	226			20	305	841
Protein(6.25).....g	0.60		1	0.05	0.81	2.23
Lipid(fat).....g	0.07		1	0.01	0.09	0.26
Carbohydrate.....g	14.24			1.28	19.22	52.97
Fiber.....g	1.72		1	0.15	2.32	6.40
Ash.....g	0.33		1	0.03	0.45	1.23
Minerals:						
Calcium.....mg	2		1	0	3	7
Iron.....mg	0.27		1	0.02	0.36	1.00
Magnesium.....mg	14		1	1	19	52
Phosphorus.....mg	13		1	1	18	48
Potassium.....mg	69		1	6	93	257
Sodium.....mg	12		1	1	16	45
Vitamins:						
Ascorbic acid.....mg	31.00		1	2.79	41.85	115.31
Thiamin.....mg	0		1	0	0	0
Riboflavin.....mg	0.024		1	0.002	0.032	0.089
Niacin.....mg	0.240		1	0.022	0.324	0.893
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 3 medium, 7/8 x 3/4 inch as purchased, pitted = 9 grams
(F) 2nd common measure: 1 cup, pitted = 135 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Ketambilla
Dovyalis hebecarpa

Item no. 02-046

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 38 % skin seeds blossom end
				235 g	454 g	
Proximate:						
Water.....g	86.39		1	203.02	392.21	242.96
Energy.....kcal	47			110	213	132
.....kJ	197			463	894	554
Protein(6.25).....g	1.50		1	3.52	6.81	4.22
Lipid(fat).....g	0.13		1	0.31	0.59	0.37
Carbohydrate.....g	11.42			26.84	51.85	32.12
Fiber.....g	0.13		1	0.31	0.59	0.37
Ash.....g	0.56		1	1.32	2.54	1.57
Minerals:						
Calcium.....mg	8		1	19	36	22
Iron.....mg	0.45		1	1.06	2.04	1.27
Magnesium.....mg						
Phosphorus.....mg	12		1	28	54	34
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	64.50		1	151.58	292.83	181.39
Thiamin.....mg	0.012		1	0.028	0.054	0.034
Riboflavin.....mg	0.051		1	0.120	0.232	0.143
Niacin.....mg	0.024		1	0.056	0.109	0.067
Vitamin A.....RE	23			54	104	65
.....IU	231		1	543	1049	650

(E) 1st common measure: 1 cup, pulp, skin and seeds removed = 235 grams
(F) 2nd common measure: 1 pound, pulp, skin and seeds removed = 454 grams

Vitamin values are from a different sample lot and have been adjusted to the moisture content shown. Vitamin values are for whole fruit and proximate and mineral values are for pulp only.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Lemon peel, dried
Citrus nobilis

Item no. 02-047

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 5 % seeds
				8 g	45 g	
Proximate:						
Water.....g	25.30		1	2.02	11.38	109.02
Energy.....kcal	150			12	68	646
.....kJ	629			50	283	2710
Protein(6.25).....g	2.68		1	0.21	1.21	11.55
Lipid(fat).....g	3.85		1	0.31	1.73	16.59
Carbohydrate.....g	43.99			3.52	19.80	189.56
Fiber.....g	5.89		1	0.47	2.65	25.38
Ash.....g	24.18		1	1.93	10.88	104.20
Minerals:						
Calcium.....mg	262		1	21	118	1129
Iron.....mg	7.18		1	0.57	3.23	30.94
Magnesium.....mg	259		1	21	117	1116
Phosphorus.....mg	52		1	4	23	224
Potassium.....mg	560		1	45	252	2413
Sodium.....mg	11326		1	906	5097	48806
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 medium, 2 inch diameter x 3/16 inch as purchased, seeds removed = 8 grams
(F) 2nd common measure: 1 package, 1 1/4 ounce as purchased, seeds removed = 45 grams

Lemon, preserved
Citrus nobilis

Item no. 02-048

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 2 % seeds
				13 g	44 g	
Proximate:						
Water.....g	26.72		1	3.47	11.76	118.78
Energy.....kcal	177			23	78	787
.....kJ	740			96	326	3290
Protein(6.25).....g	1.21		1	0.16	0.53	5.38
Lipid(fat).....g	1.24		1	0.16	0.55	5.51
Carbohydrate.....g	65.51			8.52	28.82	291.21
Fiber.....g	3.11		1	0.40	1.37	13.82
Ash.....g	5.32		1	0.69	2.34	23.65
Minerals:						
Calcium.....mg	93		1	12	41	413
Iron.....mg	1.62		1	0.21	0.71	7.20
Magnesium.....mg	94		1	12	41	418
Phosphorus.....mg	16		1	2	7	71
Potassium.....mg	120		1	16	53	533
Sodium.....mg	1775		1	231	781	7890
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 large, 2 inch diameter x 1/4 inch as purchased, seeds removed = 13 grams
(F) 2nd common measure: 1 package, 1 1/2 ounce as purchased, seeds removed = 44 grams

Protein, lipid, and crude fiber values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Lime, juice
Citrus aurantiifolia

Item no. 02-049

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 15 g	250 g	Amount in edible portion of 1 pound food as purchased: Refuse: 69 % skin membrane pulp and seeds
Proximate:						
Water.....g	90.86		1	13.63	227.15	127.76
Energy.....kcal	24			4	60	34
.....kJ	100			15	250	141
Protein(6.25).....g	0.53		1	0.08	1.32	0.75
Lipid(fat).....g	0.01		1	0.00	0.02	0.01
Carbohydrate.....g	8.33			1.25	20.82	11.71
Fiber.....g	0.05		1	0.01	0.12	0.07
Ash.....g	0.27		1	0.04	0.68	0.38
Minerals:						
Calcium.....mg	9		1	1	22	13
Iron.....mg	0.11		1	0.02	0.28	0.15
Magnesium.....mg	8		1	1	20	11
Phosphorus.....mg	9		1	1	22	13
Potassium.....mg	82		1	12	205	115
Sodium.....mg	4		1	1	10	6
Vitamins:						
Ascorbic acid.....mg	25.10		1	3.76	62.75	35.29
Thiamin.....mg	0.020		1	0.003	0.050	0.028
Riboflavin.....mg	0.034		1	0.005	0.085	0.048
Niacin.....mg	0.230		1	0.034	0.575	0.323
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 tablespoon = 15 grams
(F) 2nd common measure: 1 cup = 250 grams

Proximate, minerals, and ascorbic acid values are from different sample lots and have been adjusted to the moisture content shown. No moisture determined on lot used for ascorbic acid determination.

Loquat
Eriobotrya japonica

Item no. 02-050

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 25 g	100 g	Amount in edible portion of 1 pound food as purchased: Refuse: 29 % seeds, skin blossom and stem ends
Proximate:						
Water.....g	87.26		1	21.82	87.26	281.03
Energy.....kcal	47			12	47	151
.....kJ	197			49	197	634
Protein(6.25).....g	0.52		1	0.13	0.52	1.67
Lipid(fat).....g	0.64		1	0.16	0.64	2.06
Carbohydrate.....g	11.10			2.78	11.10	35.75
Fiber.....g	0.83		1	0.21	0.83	2.67
Ash.....g	0.48		1	0.12	0.48	1.55
Minerals:						
Calcium.....mg	9		2	2	9	29
Iron.....mg	0.14		2	0.04	0.14	0.45
Magnesium.....mg	17		1	4	17	55
Phosphorus.....mg	11		2	3	11	35
Potassium.....mg	185		1	46	185	596
Sodium.....mg	2		1	0	2	6
Vitamins:						
Ascorbic acid.....mg	0		2	0	0	0
Thiamin.....mg	0.019		2	0.005	0.019	0.061
Riboflavin.....mg	0.024		2	0.006	0.024	0.077
Niacin.....mg	0.180		2	0.045	0.180	0.580
Vitamin A.....RE	112			28	112	361
.....IU	1122		2	280	1122	3613

(E) 1st common measure: 1 medium, 2 1/4 x 1 3/4 inch as purchased, peeled and pitted = 25 grams
(F) 2nd common measure: 10 fruit, 1 1/2 inch length as purchased, peeled and pitted = 100 grams

Proximate, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Lychee, Brewster
Litchi chinensis

Item no. 02-051

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 13 g	190 g	Refuse: 41 % seed skin
	A	B	C	D	E	F	G
Proximate:							
Water.....g	80.96		1	10.52	153.82	216.67
Energy.....kcal	68			9	129	182
.....kJ	285			37	542	763
Protein(6.25).....g	0.75		1	0.10	1.42	2.01
Lipid(fat).....g	0.22		1	0.03	0.42	0.59
Carbohydrate.....g	17.70			2.30	33.63	47.37
Fiber.....g	0.54		1	0.07	1.03	1.45
Ash.....g	0.37		1	0.05	0.70	0.99
Minerals:						
Calcium.....mg	10		1	1	19	27
Iron.....mg	0.16		1	0.02	0.30	0.43
Magnesium.....mg	10		1	1	19	27
Phosphorus.....mg	22		1	3	42	59
Potassium.....mg	144		1	19	274	385
Sodium.....mg	1		1	0	2	3
Vitamins:						
Ascorbic acid.....mg	80.80		2	10.50	153.52	216.24
Thiamin.....mg	0.015		1	0.002	0.028	0.040
Riboflavin.....mg	0.060		1	0.008	0.114	0.161
Niacin.....mg	0.690		1	0.090	1.311	1.847
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 1 1/2 x 1 1/4 inch as purchased, peeled and pitted = 13 grams
(F) 2nd common measure: 1 cup, peeled and pitted = 190 grams

Vitamins, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Lychee, Kwai Mi
Litchi chinensis

Item no. 02-052

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 13 g	190 g	Refuse: 29 % seed skin
	A	B	C	D	E	F	G
Proximate:							
Water.....g	77.63		1	10.09	147.50	250.01
Energy.....kcal	80			10	152	258
.....kJ	335			44	636	1079
Protein(6.25).....g	0.94		1	0.12	1.79	3.03
Lipid(fat).....g	0.29		1	0.04	0.55	0.93
Carbohydrate.....g	20.77			2.70	39.46	66.89
Fiber.....g	0.16		1	0.02	0.30	0.52
Ash.....g	0.37		1	0.05	0.70	1.19
Minerals:						
Calcium.....mg	4		1	1	8	13
Iron.....mg	0.37		1	0.05	0.70	1.19
Magnesium.....mg	16		1	2	30	52
Phosphorus.....mg	35		1	5	66	113
Potassium.....mg	233		1	30	443	750
Sodium.....mg	7		1	1	13	23
Vitamins:						
Ascorbic acid.....mg	40.20		1	5.23	76.38	129.47
Thiamin.....mg	0.035		1	0.005	0.066	0.113
Riboflavin.....mg	0.084		1	0.011	0.160	0.271
Niacin.....mg	1.910		1	0.248	3.629	6.151
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 1 1/2 x 1 1/4 inch as purchased, peeled and pitted = 13 grams
(F) 2nd common measure: 1 cup, peeled and pitted = 190 grams

Vitamin values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Lychee, semi-dried (Taiwan)
Litchi chinensis

Item no. 02-053

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 14 g	130 g	Refuse: 43 % seed skin
	A	B	C	D	E	F	G
Proximate:							
Water.....g	36.21		1	5.07	47.07	93.62
Energy.....kcal	234			33	304	605
.....kJ	978			137	1271	2529
Protein(6.25).....g	4.80		1	0.67	6.24	12.41
Lipid(fat).....g	2.62		1	0.37	3.41	6.77
Carbohydrate.....g	54.38			7.61	70.69	140.60
Fiber.....g	0.80		1	0.11	1.04	2.07
Ash.....g	1.99		1	0.28	2.59	5.15
Minerals:						
Calcium.....mg	14		1	2	18	36
Iron.....mg	0.89		1	0.12	1.16	2.30
Magnesium.....mg	76		1	11	99	196
Phosphorus.....mg	119		1	17	155	308
Potassium.....mg	893		1	125	1161	2309
Sodium.....mg	18		1	3	23	47
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium, 1 1/4 x 1 1/4 inch as purchased, peeled and pitted = 14 grams
(F) 2nd common measure: 1 package, 8 ounces as purchased, peeled and pitted = 130 grams

Mango, Haden
Mangifera indica

Item no. 02-054

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 230 g	170 g	Refuse: 30 % seed skin
	A	B	C	D	E	F	G
Proximate:							
Water.....g	84.12		1	193.48	143.00	267.10
Energy.....kcal	56			129	95	178
.....kJ	234			538	398	743
Protein(6.25).....g	0.39		1	0.90	0.66	1.24
Lipid(fat).....g	0.02		1	0.05	0.03	0.06
Carbohydrate.....g	15.05			34.62	25.58	47.79
Fiber.....g	0.54		1	1.24	0.92	1.71
Ash.....g	0.42		1	0.97	0.71	1.33
Minerals:						
Calcium.....mg	8		1	18	14	25
Iron.....mg	0.16		1	0.37	0.27	0.51
Magnesium.....mg	12		1	28	20	38
Phosphorus.....mg	10		1	23	17	32
Potassium.....mg	159		1	366	270	505
Sodium.....mg	0		1	0	0	0
Vitamins:						
Ascorbic acid.....mg	15.10		1	34.73	25.67	47.95
Thiamin.....mg	0.041		1	0.094	0.070	0.130
Riboflavin.....mg	0.057		1	0.131	0.097	0.181
Niacin.....mg	0.300		1	0.690	0.510	0.953
Vitamin A.....RE	381			876	648	1210
.....IU	3813		1	8770	6482	12107

(E) 1st common measure: 1 medium, 3 5/8 x 3 1/4 inch as purchased, peeled and pitted = 230 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 170 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Mango, Pirie
Mangifera indica

Item no. 02-055

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 37 % seed skin
				170 g	170 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	79.97		1	135.95	135.95	228.53
Energy.....kcal	72			122	122	206
.....kJ	301			512	512	860
Protein(6.25).....g	0.55		1	0.94	0.94	1.57
Lipid(fat).....g	0.20		1	0.34	0.34	0.57
Carbohydrate.....g	18.91			32.15	32.15	54.04
Fiber.....g	0.70		1	1.19	1.19	2.00
Ash.....g	0.37		1	0.63	0.63	1.06
Minerals:						
Calcium.....mg	6		1	10	10	17
Iron.....mg	0.16		1	0.27	0.27	0.46
Magnesium.....mg	12		1	20	20	34
Phosphorus.....mg	15		1	26	26	43
Potassium.....mg	176		1	299	299	503
Sodium.....mg	3		1	5	5	9
Vitamins:						
Ascorbic acid.....mg	15.00		2	25.50	25.50	42.87
Thiamin.....mg	0.081		1	0.138	0.138	0.231
Riboflavin.....mg	0.060		1	0.102	0.102	0.171
Niacin.....mg	0.460		1	0.782	0.782	1.315
Vitamin A.....RE	474			806	806	1355
.....IU	4735		1	8050	8050	13531

(E) 1st common measure: 1 medium, 3 1/8 x 3 1/8 inch as purchased, peeled and pitted = 170 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 170 grams

Vitamins, sodium, potassium, magnesium, and iron values are from different sample lots and have been adjusted to the moisture content shown.

Mango, chutney

Item no. 02-056

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				18 g	70 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	45.45		1	8.18	31.82	206.16
Energy.....kcal	194			35	136	880
.....kJ	811			146	568	3679
Protein(6.25).....g	0.30		1	0.05	0.21	1.36
Lipid(fat).....g	0.20		1	0.04	0.14	0.91
Carbohydrate.....g	53.10			9.56	37.17	240.86
Fiber.....g	0.94		1	0.17	0.66	4.26
Ash.....g	0.95		1	0.17	0.66	4.31
Minerals:						
Calcium.....mg	8		1	1	6	36
Iron.....mg	0.90		1	0.16	0.63	4.08
Magnesium.....mg	9		1	2	6	41
Phosphorus.....mg	11		1	2	8	50
Potassium.....mg	118		1	21	83	535
Sodium.....mg	390		1	70	273	1769
Vitamins:						
Ascorbic acid.....mg	3.80		1	0.68	2.66	17.24
Thiamin.....mg	0		1	0	0	0
Riboflavin.....mg	0.046		1	0.008	0.032	0.209
Niacin.....mg	0.040		1	0.007	0.028	0.181
Vitamin A.....RE	5			1	4	23
.....IU	48		1	9	34	218

(E) 1st common measure: 1 tablespoon = 18 grams
(F) 2nd common measure: 1/4 cup = 70 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Mango, sauce
Mangifera indica

Item no. 02-057

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				70 g	270 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	61.60		1	43.12	166.32	279.42
Energy.....kcal	138			97	373	626
.....kJ	579			405	1563	2626
Protein(6.25).....g	0.25		1	0.18	0.68	1.13
Lipid(fat).....g	0.08		1	0.06	0.22	0.36
Carbohydrate.....g	38.01			26.61	102.63	172.41
Fiber.....g	0.45		1	0.32	1.22	2.04
Ash.....g	0.06		1	0.04	0.16	0.27
Minerals:						
Calcium.....mg	5		1	4	14	23
Iron.....mg	0.12		1	0.08	0.32	0.54
Magnesium.....mg	7		1	5	19	32
Phosphorus.....mg	5		1	4	14	23
Potassium.....mg	98		1	69	265	445
Sodium.....mg	5		1	4	14	23
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 4 tablespoons = 70 grams
(F) 2nd common measure: 1 cup = 270 grams

Mango, shredded, sweet and sour
Mangifera indica

Item no. 02-058

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				20 g	42 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	27.68		1	5.54	11.63	125.56
Energy.....kcal	258			52	108	1170
.....kJ	1078			216	453	4890
Protein(6.25).....g	0.45		1	0.09	0.19	2.04
Lipid(fat).....g	0.45		1	0.09	0.19	2.04
Carbohydrate.....g	70.09			14.02	29.44	317.93
Fiber.....g	1.52		1	0.30	0.64	6.89
Ash.....g	1.33		1	0.27	0.56	6.03
Minerals:						
Calcium.....mg	50		1	10	21	227
Iron.....mg	1.18		1	0.24	0.50	5.35
Magnesium.....mg	10		1	2	4	45
Phosphorus.....mg	10		1	2	4	45
Potassium.....mg	101		1	20	42	458
Sodium.....mg	416		1	83	175	1887
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium slices, 2 7/8 x 3/8 x 3/8 inch as purchased = 20 grams
(F) 2nd common measure: 1 package, 1 1/2 ounces as purchased = 42 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Mountain apple
Eugenia malaccensis

Item no. 02-059

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 18 % seeds blossom and stem ends
				55 g	150 g	
Proximate:						
Water.....g	91.54		1	50.35	137.31	340.48
Energy.....kcal	30			16	45	112
.....kJ	126			69	189	469
Protein(6.25).....g	0.33		1	0.18	0.50	1.23
Lipid(fat).....g	0.06		1	0.03	0.09	0.22
Carbohydrate.....g	7.81			4.30	11.72	29.05
Fiber.....g	0.80		1	0.44	1.20	2.98
Ash.....g	0.26		1	0.14	0.39	0.97
Minerals:						
Calcium.....mg	7		2	4	10	26
Iron.....mg	0.38		1	0.21	0.57	1.41
Magnesium.....mg	8		1	4	12	30
Phosphorus.....mg	13		2	7	20	48
Potassium.....mg	58		1	32	87	216
Sodium.....mg	19		1	10	28	71
Vitamins:						
Ascorbic acid.....mg	23.40		1	12.87	35.10	87.04
Thiamin.....mg	0.029		1	0.016	0.044	0.108
Riboflavin.....mg	0.036		1	0.020	0.054	0.134
Niacin.....mg	0.240		1	0.132	0.360	0.893
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 2 x 1 7/8 inch as purchased, pitted = 55 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 150 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Mulberry
Morus nigra

Item no. 02-060

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				2 g	140 g	
Proximate:						
Water.....g	86.91		1	1.74	121.67	394.22
Energy.....kcal	46			1	64	209
.....kJ	192			4	269	871
Protein(6.25).....g	1.44		1	0.03	2.02	6.53
Lipid(fat).....g	0.39		1	0.01	0.55	1.77
Carbohydrate.....g	10.57			0.21	14.80	47.95
Fiber.....g	0.96		1	0.02	1.34	4.35
Ash.....g	0.69		1	0.01	0.97	3.13
Minerals:						
Calcium.....mg	39		1	1	55	177
Iron.....mg	1.85		1	0.04	2.59	8.39
Magnesium.....mg	19		1	0	27	86
Phosphorus.....mg	38		1	1	53	172
Potassium.....mg	206		1	4	288	934
Sodium.....mg	11		1	0	15	50
Vitamins:						
Ascorbic acid.....mg	36.40		1	0.73	50.96	165.11
Thiamin.....mg	0.029		1	0.001	0.041	0.132
Riboflavin.....mg	0.101		1	0.002	0.141	0.458
Niacin.....mg	0.620		1	0.012	0.868	2.812
Vitamin A.....RE	2			0	3	9
.....IU	15		1	0	21	68

(E) 1st common measure: 1 medium, 1 x 1/2 inch as purchased = 2 grams
(F) 2nd common measure: 1 cup = 140 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Ohelo berry
Vaccinium reticulatum

Item no. 02-061

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				1 g	140 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	90.07		1	0.90	126.10	408.56
Energy.....kcal	36				50	163
.....kJ	151			2	211	685
Protein(6.25).....g	0.38		1	0.00	0.53	1.72
Lipid(fat).....g	0.22		1	0.00	0.31	1.00
Carbohydrate.....g	9.07			0.09	12.70	41.14
Fiber.....g	1.32		1	0.01	1.85	5.99
Ash.....g	0.26		1	0.00	0.36	1.18
Minerals:						
Calcium.....mg	7		1	0	10	32
Iron.....mg	0.09		1	0.00	0.13	0.41
Magnesium.....mg	8		1	0	11	36
Phosphorus.....mg	10		1	0	14	46
Potassium.....mg	50		1	0	70	227
Sodium.....mg	2		1	0	3	9
Vitamins:						
Ascorbic acid.....mg	6.00		1	0.06	8.40	27.22
Thiamin.....mg	0.017		1	0.000	0.024	0.077
Riboflavin.....mg	0.036		1	0.000	0.050	0.163
Niacin.....mg	0.270		1	0.003	0.378	1.225
Vitamin A.....RE	50			0	70	227
.....IU	498		1	5	697	2259

(E) 1st common measure: 1 medium, 3/8 x 1/2 inch as purchased = 1 gram
(F) 2nd common measure: 1 cup = 140 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Olive , dried, sweet and sour
Elaeocarpus serratus

Item no. 02-062

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				20 g	200 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	32.65		1	6.53	65.30	148.10
Energy.....kcal	243			49	486	1102
.....kJ	1017			203	2034	4613
Protein(6.25).....g	0.86		1	0.17	1.72	3.90
Lipid(fat).....g	2.00		1	0.40	4.00	9.07
Carbohydrate.....g	62.09			12.42	124.18	281.64
Fiber.....g	3.06		1	0.61	6.12	13.88
Ash.....g	2.40		1	0.48	4.80	10.89
Minerals:						
Calcium.....mg	55		1	11	110	249
Iron.....mg	2.84		1	0.57	5.68	12.88
Magnesium.....mg	20		1	4	40	91
Phosphorus.....mg	13		1	3	26	59
Potassium.....mg	69		1	14	138	313
Sodium.....mg	759		1	152	1518	3443
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium halves, 1 1/4 x 3/4 x 1/2 inch as purchased = 20 grams
(F) 2nd common measure: 1 package, 7 ounces as purchased = 200 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Orange
Citrus sinensis

Item no. 02-063

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 37 % skin membranes navel end
				220 g	190 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	89.38		1	196.64	169.82	255.42
Energy.....kcal	37			81	70	106
.....kJ	155			341	294	443
Protein(6.25).....g	0.55		1	1.21	1.04	1.57
Lipid(fat).....g	0.08		1	0.18	0.15	0.23
Carbohydrate.....g	9.66			21.25	18.35	27.61
Fiber.....g	0.18		1	0.40	0.34	0.51
Ash.....g	0.33		1	0.73	0.63	0.94
Minerals:						
Calcium.....mg	23		1	51	44	66
Iron.....mg	0.20		1	0.44	0.38	0.57
Magnesium.....mg	12		1	26	23	34
Phosphorus.....mg	21		1	46	40	60
Potassium.....mg	193		1	425	367	552
Sodium.....mg	2		1	4	4	6
Vitamins:						
Ascorbic acid.....mg	50.50		1	111.10	95.95	144.31
Thiamin.....mg	0.104		1	0.229	0.198	0.297
Riboflavin.....mg	0.086		1	0.189	0.163	0.246
Niacin.....mg	0.340		1	0.748	0.646	0.972
Vitamin A.....RE	65			143	124	186
.....IU	646		1	1421	1227	1846

(E) 1st common measure: 1 large, 3 1/2 x 3 5/8 inch as purchased, peel and membranes removed = 220 gram
(F) 2nd common measure: 1 cup, sections = 190 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Orange, juice, reconstituted
Citrus sinensis

Item no. 02-064

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				250 g	1000 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	88.00		1	220.00	880.00	399.17
Energy.....kcal	43			108	430	195
.....kJ	178			445	1780	807
Protein(6.25).....g	0.60		1	1.50	6.00	2.72
Lipid(fat).....g	0.20		1	0.50	2.00	0.91
Carbohydrate.....g	10.80			27.00	108.00	48.99
Fiber.....g	0.10		1	0.25	1.00	0.45
Ash.....g	0.40		1	1.00	4.00	1.81
Minerals:						
Calcium.....mg	9		1	22	90	41
Iron.....mg	0.15		1	0.38	1.50	0.68
Magnesium.....mg	12		1	30	120	54
Phosphorus.....mg	17		1	42	170	77
Potassium.....mg	205		1	512	2050	930
Sodium.....mg	4		1	10	40	18
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup = 250 grams
(F) 2nd common measure: 1 quart = 1000 grams

Minerals are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Papaya, green, raw
Carica papaya

Item no. 02-065

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 175 g	105 g	Refuse: 27 % skin stem seeds
Proximate:						
Water.....g	88.01		1	154.02	92.41	291.43
Energy.....kcal	42			74	44	139
.....kJ	177			310	186	586
Protein(6.25).....g	0.47		1	0.82	0.49	1.56
Lipid(fat).....g	0.21		1	0.37	0.22	0.70
Carbohydrate.....g	10.84			18.97	11.38	35.89
Fiber.....g	0.82		1	1.44	0.86	2.72
Ash.....g	0.47		1	0.82	0.49	1.56
Minerals:						
Calcium.....mg	19		1	33	20	63
Iron.....mg	0.20		1	0.35	0.21	0.66
Magnesium.....mg	21		1	37	22	70
Phosphorus.....mg	10		1	18	10	33
Potassium.....mg	247		1	432	259	818
Sodium.....mg	5		1	9	5	17
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1/2 medium, 5 1/2 x 3 3/4 inch as purchased, skin and seeds removed = 175 grams
(F) 2nd common measure: 1 cup, 1/4 to 3/8 inch slices quartered = 105 grams

Papaya, green, cooked
Carica papaya

Item no. 02-066

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 130 g	454 g	Refuse: 27 % skin stem seeds
Proximate:						
Water.....g	87.84		1	114.19	398.79	290.86
Energy.....kcal	43			56	195	142
.....kJ	179			233	813	593
Protein(6.25).....g	0.37		1	0.48	1.68	1.23
Lipid(fat).....g	0.25		1	0.32	1.14	0.83
Carbohydrate.....g	10.97			14.26	49.80	36.32
Fiber.....g	0.78		1	1.01	3.54	2.58
Ash.....g	0.57		1	0.74	2.59	1.89
Minerals:						
Calcium.....mg	19		1	25	86	63
Iron.....mg	0.20		1	0.26	0.91	0.66
Magnesium.....mg	22		1	29	100	73
Phosphorus.....mg	9		1	12	41	30
Potassium.....mg	232		1	302	1053	768
Sodium.....mg	5		1	6	23	17
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup, 1/4 to 1/8 inch slices quartered = 130 grams
(F) 2nd common measure: 1 pound = 454 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Papaya, Solo, hermaphrodite
Carica papaya

Item no. 02-067

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 31 % skin seeds
				145 g	140 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	86.80		1	125.86	121.52	271.67
Energy.....kcal	46			67	64	144
.....kJ	192			278	269	601
Protein(6.25).....g	0.39		1	0.57	0.55	1.22
Lipid(fat).....g	0.06		1	0.09	0.08	0.19
Carbohydrate.....g	12.18			17.66	17.05	38.12
Fiber.....g	0.58		1	0.84	0.81	1.82
Ash.....g	0.57		1	0.83	0.80	1.78
Minerals:						
Calcium.....mg	30		1	44	42	94
Iron.....mg	0.19		1	0.28	0.27	0.59
Magnesium.....mg	21		1	30	29	66
Phosphorus.....mg	12		1	17	17	38
Potassium.....mg	183		1	265	256	573
Sodium.....mg	4		1	6	6	13
Vitamins:						
Ascorbic acid.....mg	84.00		85	121.80	117.60	262.91
Thiamin.....mg	0.027		2	0.039	0.038	0.084
Riboflavin.....mg	0.043		2	0.062	0.060	0.135
Niacin.....mg	0.330		2	0.478	0.462	1.033
Vitamin A.....RE	109			158	153	341
.....IU	1093		1	1585	1530	3421

(E) 1st common measure: 1/2 medium, 5 x 4 inch as purchased, skin and seeds removed = 145 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 140 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown. Ascorbic acid value in 85 samples ranges from 59 to 122.

Papaya, Solo, pistillate
Carica papaya

Item no. 02-068

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 37 % skin seeds
				230 g	140 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	86.25		1	198.38	120.75	246.47
Energy.....kcal	48			110	67	137
.....kJ	201			462	281	574
Protein(6.25).....g	0.40		1	0.92	0.56	1.14
Lipid(fat).....g	0.08		1	0.18	0.11	0.23
Carbohydrate.....g	12.70			29.21	17.78	36.29
Fiber.....g	0.60		1	1.38	0.84	1.71
Ash.....g	0.57		1	1.31	0.80	1.63
Minerals:						
Calcium.....mg	41		1	94	57	117
Iron.....mg	0.21		1	0.48	0.29	0.60
Magnesium.....mg						
Phosphorus.....mg	16		1	37	22	46
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	74.10		1	170.43	103.74	211.75
Thiamin.....mg	0.020		1	0.046	0.028	0.057
Riboflavin.....mg	0.040		1	0.092	0.056	0.114
Niacin.....mg	0.390		1	0.897	0.546	1.114
Vitamin A.....RE	203			467	284	580
.....IU	2034		1	4678	2848	5813

(E) 1st common measure: 1/2 medium, 4 1/2 x 4 1/4 inch as purchased, skin & seeds removed = 230 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 140 grams

Thiamin, riboflavin, and niacin values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Papaya, drink, canned
Carica papaya

Item no. 02-069

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				250 g	375 g	
	A	B	C	D	E	F	G
Proximate:						
Water.....g	89.04		1	222.60	333.90	403.89
Energy.....kcal	39			98	146	177
.....kJ	16			41	62	75
Protein(6.25).....g	0.12		1	0.30	0.45	0.54
Lipid(fat).....g	0.08		1	0.20	0.30	0.36
Carbohydrate.....g	10.65			26.62	39.94	48.31
Fiber.....g	0.16		1	0.40	0.60	0.73
Ash.....g	0.11		1	0.28	0.41	0.50
Minerals:						
Calcium.....mg	3		1	8	11	14
Iron.....mg	0.19		1	0.48	0.71	0.86
Magnesium.....mg	4		1	10	15	18
Phosphorus.....mg	4		1	10	15	18
Potassium.....mg	48		1	120	180	218
Sodium.....mg	3		1	8	11	14
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup = 250 grams
(F) 2nd common measure: 1 can, 12 fluid ounces = 375 grams

Papaya-passion fruit nectar, canned

Item no. 02-070

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				235 g	350 g	
	A	B	C	D	E	F	G
Proximate:						
Water.....g	87.02		1	204.50	304.57	394.72
Energy.....kcal	47			110	164	213
.....kJ	195			458	682	885
Protein(6.25).....g	0.16		1	0.38	0.56	0.73
Lipid(fat).....g	0.04		1	0.09	0.14	0.18
Carbohydrate.....g	12.68			29.80	44.38	57.52
Fiber.....g	0.16		1	0.38	0.56	0.73
Ash.....g	0.10		1	0.24	0.35	0.45
Minerals:						
Calcium.....mg	5		1	12	18	23
Iron.....mg						
Magnesium.....mg	4		1	9	14	18
Phosphorus.....mg	3		1	7	10	14
Potassium.....mg	33		1	78	116	150
Sodium.....mg	2		1	5	7	9
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup = 235 grams
(F) 2nd common measure: 1 can, 12 fluid ounces = 350 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Papaya-pineapple nectar, canned — Item no. 02-071

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 250 g	375 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	88.26		1	220.65	330.98	400.35
Energy.....kcal	46			115	172	209
.....kJ	191			478	716	866
Protein(6.25).....g	0.14		1	0.35	0.52	0.64
Lipid(fat).....g	0.04		1	0.10	0.15	0.18
Carbohydrate.....g	11.43			28.58	42.86	51.85
Fiber.....g	0.15		1	0.38	0.56	0.68
Ash.....g	0.13		1	0.32	0.49	0.59
Minerals:						
Calcium.....mg	5		1	12	19	23
Iron.....mg	0.25		1	0.62	0.94	1.13
Magnesium.....mg	7		1	18	26	32
Phosphorus.....mg	4		1	10	15	18
Potassium.....mg	55		1	138	206	249
Sodium.....mg	2		1	5	8	9
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup = 250 grams
(F) 2nd common measure: 1 can, 12 fluid ounces = 375 grams

Passion fruit, purple, juice
Passiflora edulis — Item no. 02-072

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 250 g	21 g	Amount in edible portion of 1 pound food as purchased: Refuse: 66 % skin seeds
	A	B	C	D	E	F	G
Proximate:						
Water.....g	85.62		1	214.05	17.98	132.05
Energy.....kcal	51			128	11	79
.....kJ	213			532	45	328
Protein(6.25).....g	0.39		1	0.98	0.08	0.60
Lipid(fat).....g	0.05		1	0.12	0.01	0.08
Carbohydrate.....g	13.60			34.00	2.86	20.97
Fiber.....g	0.04		1	0.10	0.01	0.06
Ash.....g	0.34		1	0.85	0.07	0.52
Minerals:						
Calcium.....mg	4		1	10	1	6
Iron.....mg	0.24		1	0.60	0.05	0.37
Magnesium.....mg						
Phosphorus.....mg	13		1	32	3	20
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	29.80		1	74.50	6.26	45.96
Thiamin.....mg	0			0	0	0
Riboflavin.....mg	0.131		1	0.328	0.028	0.202
Niacin.....mg	1.460		1	3.650	0.307	2.252
Vitamin A.....RE	72			180	15	111
.....IU	717		1	1792	151	1106

(E) 1st common measure: 1 cup = 250 grams
(F) 2nd common measure: 1 medium, 2 1/4 x 2 inch as purchased, skin and seeds removed = 21 grams

Proximate and mineral values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Passion fruit, yellow, juice
Passiflora edulis

Item no. 02-073

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 60 % skin seeds
				250 g	22 g	
Proximate:						
Water.....g	84.94		1	212.35	18.69	154.12
Energy.....kcal	53			132	12	96
.....kJ	222			555	49	403
Protein(6.25).....g	0.67		1	1.68	0.15	1.22
Lipid(fat).....g	0.18		1	0.45	0.04	0.33
Carbohydrate.....g	13.72			34.30	3.02	24.89
Fiber.....g	0.17		1	0.42	0.04	0.31
Ash.....g	0.49		1	1.22	0.11	0.89
Minerals:						
Calcium.....mg	4		1	10	1	7
Iron.....mg	0.36		1	0.90	0.08	0.65
Magnesium.....mg	15		1	38	3	27
Phosphorus.....mg	25		1	62	6	45
Potassium.....mg	254		1	635	56	461
Sodium.....mg	6		1	15	1	11
Vitamins:						
Ascorbic acid.....mg	20.00		1	50.00	4.40	36.29
Thiamin.....mg	0			0	0	0
Riboflavin.....mg	0.101		1	0.252	0.022	0.183
Niacin.....mg	2.240		1	5.600	0.493	4.064
Vitamin A.....RE	241			602	53	437
.....IU	2410		1	6025	530	4373

(E) 1st common measure: 1 cup = 250 grams
(F) 2nd common measure: 1 medium, 2 3/8 x 2 inch as purchased, skin and seeds removed = 22 grams

Proximate, mineral, and ascorbic acid values are from different sample lots and have been adjusted to the moisture content shown.

Passion fruit, juice, base, frozen
Passiflora edulis

Item no. 02-074

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 0 %
				145 g	215 g	
Proximate:						
Water.....g	56.96		1	82.59	122.46	258.37
Energy.....kcal	168			244	361	762
.....kJ	705			1022	1516	3198
Protein(6.25).....g	0.02		1	0.03	0.04	0.09
Lipid(fat).....g	0.17		1	0.25	0.37	0.77
Carbohydrate.....g	42.60			61.77	91.59	193.23
Fiber.....g	0.08		1	0.12	0.17	0.36
Ash.....g	0.25		1	0.36	0.54	1.13
Minerals:						
Calcium.....mg	4		1	6	9	18
Iron.....mg	0.64		1	0.93	1.38	2.90
Magnesium.....mg	6		1	9	13	27
Phosphorus.....mg	7		1	10	15	32
Potassium.....mg	110		1	160	236	499
Sodium.....mg	5		1	7	11	23
Vitamins:						
Ascorbic acid.....mg	107.80		1	156.31	231.77	488.98
Thiamin.....mg	0.005		1	0.007	0.011	0.023
Riboflavin.....mg	0.140		1	0.203	0.301	0.635
Niacin.....mg	0.860		1	1.247	1.849	3.901
Vitamin A.....RE	262			380	563	1188
.....IU	2624		1	3805	5642	11902

(E) 1st common measure: 1/2 cup, base = 145 grams
(F) 2nd common measure: 1 can, 6 fluid ounces, base = 215 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Passion fruit-orange, nectar — Item no. 02-075

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 250 g	1000 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	90.02		1	225.05	900.20	408.33
Energy.....kcal	39			98	390	177
.....kJ	163			408	1630	739
Protein(6.25).....g	0.06		1	0.15	0.60	0.27
Lipid(fat).....g	0.04		1	0.10	0.40	0.18
Carbohydrate.....g	9.82			24.55	98.20	44.54
Fiber.....g	0.03		1	0.08	0.30	0.14
Ash.....g	0.06		1	0.15	0.60	0.27
Minerals:						
Calcium.....mg	2		1	5	20	9
Iron.....mg	0.05		1	0.12	0.50	0.23
Magnesium.....mg	2		1	5	20	9
Phosphorus.....mg	2		1	5	20	9
Potassium.....mg	7		1	18	70	32
Sodium.....mg	3		1	8	30	14
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup = 250 grams
(F) 2nd common measure: 1 quart = 1000 grams

Passion fruit-orange, drink, canned — Item no. 02-076

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 240 g	360 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	88.59		1	212.62	318.92	401.84
Energy.....kcal	46			110	166	209
.....kJ	192			461	691	871
Protein(6.25).....g	0.04		1	0.10	0.14	0.18
Lipid(fat).....g	0.29		1	0.70	1.04	1.32
Carbohydrate.....g	11.04			26.50	39.74	50.08
Fiber.....g	0.06		1	0.14	0.22	0.27
Ash.....g	0.04		1	0.10	0.14	0.18
Minerals:						
Calcium.....mg	2		1	5	7	9
Iron.....mg	0.32		1	0.77	1.15	1.45
Magnesium.....mg	2		1	5	7	9
Phosphorus.....mg	2		1	5	7	9
Potassium.....mg	9		1	22	32	41
Sodium.....mg	4		1	10	14	18
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 cup = 240 grams
(F) 2nd common measure: 1 can, 12 fluid ounces = 360 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Pear (Japan)
Pyrus serotina (Rehder)

Item no. 02-077

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 7 % core
				325 g	285 g	
Proximate:						
Water.....g	88.84		1	288.73	253.19	374.77
Energy.....kcal	40			130	114	169
.....kJ	166			540	473	700
Protein(6.25).....g	0.25		1	0.81	0.71	1.05
Lipid(fat).....g	0.10		1	0.32	0.28	0.42
Carbohydrate.....g	10.58			34.38	30.15	44.63
Fiber.....g	0.70		1	2.28	2.00	2.95
Ash.....g	0.23		1	0.75	0.66	0.97
Minerals:						
Calcium.....mg	4		1	13	11	17
Iron.....mg	0.14		1	0.46	0.40	0.59
Magnesium.....mg	6		1	20	17	25
Phosphorus.....mg	9		1	29	26	38
Potassium.....mg	122		1	396	348	515
Sodium.....mg	2		1	6	6	8
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 medium, 3 1/4 x 3 3/4 inch as purchased, core removed = 325 grams
(F) 2nd common measure: 1 small, 3 x 3 1/2 inch as purchased, core removed = 285 grams

Persimmon, Hachiya
Diospyros kaki

Item no. 02-078

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 18 % skin stem end
				135 g	300 g	
Proximate:						
Water.....g	78.67		1	106.20	236.01	292.61
Energy.....kcal	76			103	228	283
.....kJ	318			429	954	1183
Protein(6.25).....g	0.53		1	0.72	1.59	1.97
Lipid(fat).....g	0.15		1	0.20	0.45	0.56
Carbohydrate.....g	20.31			27.42	60.93	75.54
Fiber.....g	0.34		1	0.46	1.02	1.26
Ash.....g	0.34		1	0.46	1.02	1.26
Minerals:						
Calcium.....mg	6		1	8	18	22
Iron.....mg	0.17		1	0.23	0.51	0.63
Magnesium.....mg	10		1	14	30	37
Phosphorus.....mg	19		1	26	57	71
Potassium.....mg	230		1	310	690	855
Sodium.....mg	2		1	3	6	7
Vitamins:						
Ascorbic acid.....mg	7.30		1	9.86	21.90	27.15
Thiamin.....mg	0		1	0	0	0
Riboflavin.....mg	0.060		1	0.081	0.180	0.223
Niacin.....mg	0.180		1	0.243	0.540	0.670
Vitamin A.....RE	99			134	297	368
.....IU	985		1	1330	2955	3664

(E) 1st common measure: 1 medium, 2 1/2 x 2 1/2 inch as purchased, peeled = 135 grams
(F) 2nd common measure: 1 cup, pulp = 300 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Persimmon, dried
Diospyros kaki

Item no. 02-079

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 7 % stem ends
				30 g	40 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	23.01		1	6.90	9.20	97.07
Energy.....kcal	274			82	110	1156
.....kJ	1146			344	458	4834
Protein(6.25).....g	1.38		1	0.41	0.55	5.82
Lipid(fat).....g	0.59		1	0.18	0.24	2.49
Carbohydrate.....g	73.43			22.03	29.37	309.76
Fiber.....g	3.62		1	1.09	1.45	15.27
Ash.....g	1.59		1	0.48	0.64	6.71
Minerals:						
Calcium.....mg	25		1	8	10	105
Iron.....mg	0.74		1	0.22	0.30	3.12
Magnesium.....mg	31		1	9	12	131
Phosphorus.....mg	81		1	24	32	342
Potassium.....mg	802		1	241	321	3383
Sodium.....mg	2		1	1	1	8
Vitamins:						
Ascorbic acid.....mg	0		1	0	0	0
Thiamin.....mg	0		1	0	0	0
Riboflavin.....mg	0.029		1	0.009	0.012	0.122
Niacin.....mg	0.180		1	0.054	0.072	0.759
Vitamin A.....RE	34			10	14	143
.....IU	335		1	100	134	1413

(E) 1st common measure: 1 small, 2 1/2 x 1 3/4 inch as purchased, stem ends removed = 30 grams
(F) 2nd common measure: 1 large, 3 1/16 x 2 1/16 inch as purchased, stem ends removed = 40 grams

Pineapple, Smooth Cayenne
Ananas comosus

Item no. 02-080

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 52 % skin crown core
				160 g	170 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	85.54		1	136.86	145.42	186.24
Energy.....kcal	52			83	88	113
.....kJ	218			349	371	475
Protein(6.25).....g	0.45		1	0.72	0.76	0.98
Lipid(fat).....g	0.21		1	0.34	0.36	0.46
Carbohydrate.....g	13.51			21.62	22.97	29.42
Fiber.....g	0.50		1	0.80	0.85	1.09
Ash.....g	0.29		1	0.46	0.49	0.63
Minerals:						
Calcium.....mg	18		1	29	31	39
Iron.....mg	0.26		1	0.42	0.44	0.57
Magnesium.....mg	12		1	19	20	26
Phosphorus.....mg	12		1	19	20	26
Potassium.....mg	98		1	157	167	213
Sodium.....mg	1		1	2	2	2
Vitamins:						
Ascorbic acid.....mg	10.10		1	16.16	17.17	21.99
Thiamin.....mg	0.085		1	0.136	0.144	0.185
Riboflavin.....mg	0.036		1	0.058	0.061	0.078
Niacin.....mg	0.240		1	0.384	0.408	0.523
Vitamin A.....RE	5			8	8	11
.....IU	53		1	85	90	115

(E) 1st common measure: 1 wedge, 1/8 of medium, 7 x 5 1/4 inch as purchased, refuse removed = 160 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 170 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Pineapple-grapefruit, juice, concentrate, frozen — Item no. 02-081

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 145 g	210 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
	A	B	C	D	E	F	G
Proximate:						
Water.....g	53.90		1	78.16	113.19	244.49
Energy.....kcal	163			236	342	739
.....kJ	682			989	1432	3094
Protein(6.25).....g	0.04		1	0.06	0.08	0.18
Lipid(fat).....g	0.23		1	0.33	0.48	1.04
Carbohydrate.....g	44.59			64.66	93.64	202.26
Fiber.....g	0.20		1	0.29	0.42	0.91
Ash.....g	1.24		1	1.80	2.60	5.62
Minerals:						
Calcium.....mg	52		1	75	109	236
Iron.....mg	0.58		1	0.84	1.22	2.63
Magnesium.....mg	51		1	74	107	231
Phosphorus.....mg	29		1	42	61	132
Potassium.....mg	510		1	740	1071	2313
Sodium.....mg	3		1	4	6	14
Vitamins:						
Ascorbic acid.....mg	131.90		1	191.26	276.99	598.30
Thiamin.....mg	0.158		1	0.229	0.332	0.717
Riboflavin.....mg	0.064		1	0.093	0.134	0.290
Niacin.....mg	0.820		1	1.189	1.722	3.720
Vitamin A.....RE	13			19	27	59
.....IU	133		1	193	279	603

(E) 1st common measure: 1/2 cup, concentrate = 145 grams
(F) 2nd common measure: 1 can, 6 fluid ounces, concentrate = 210 grams

Plum, Methley
Prunus cerasifera x P. salicina — Item no. 02-082

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 46 g	160 g	Amount in edible portion of 1 pound food as purchased: Refuse: 6 % seed
	A	B	C	D	E	F	G
Proximate:						
Water.....g	88.70		1	40.80	141.92	378.20
Energy.....kcal	40			18	64	171
.....kJ	167			77	267	712
Protein(6.25).....g	0.55		1	0.25	0.88	2.35
Lipid(fat).....g	0.06		1	0.03	0.10	0.26
Carbohydrate.....g	10.42			4.79	16.67	44.43
Fiber.....g	0.89		1	0.41	1.42	3.79
Ash.....g	0.27		1	0.12	0.43	1.15
Minerals:						
Calcium.....mg	5		1	2	8	21
Iron.....mg	0.14		1	0.06	0.22	0.60
Magnesium.....mg	8		1	4	13	34
Phosphorus.....mg	13		1	6	21	55
Potassium.....mg	189		1	87	302	806
Sodium.....mg	5		1	2	8	21
Vitamins:						
Ascorbic acid.....mg	3.20		1	1.47	5.12	13.64
Thiamin.....mg	0.012		1	0.006	0.019	0.051
Riboflavin.....mg	0.033		1	0.015	0.053	0.141
Niacin.....mg	0.370		1	0.170	0.592	1.578
Vitamin A.....RE	8			4	13	34
.....IU	85		1	39	136	362

(E) 1st common measure: 1 medium, 1 3/4 x 1 3/4 inch as purchased, pitted = 46 grams
(F) 2nd common measure: 1 cup, 3/8 inch slices = 160 grams

Sodium, potassium, magnesium, vitamin A, thiamin and niacin values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Plum, dried, salted
Prunus salicina

Item no. 02-083

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 37 % seed stem end
				10 g	75 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	4.90		1	0.49	3.68	14.00
Energy.....kcal	120			12	90	343
.....kJ	501			50	376	1432
Protein(6.25).....g	3.54		1	0.35	2.66	10.12
Lipid(fat).....g	8.52		1	0.85	6.39	24.35
Carbohydrate.....g	10.18			1.02	7.64	29.09
Fiber.....g	3.02		1	0.30	2.26	8.63
Ash.....g	72.86		1	7.29	54.64	208.21
Minerals:						
Calcium.....mg	150		1	15	112	429
Iron.....mg	40.98		1	4.10	30.74	117.11
Magnesium.....mg	43		1	4	32	123
Phosphorus.....mg	73		1	7	55	209
Potassium.....mg	652		1	65	489	1863
Sodium.....mg	6861		1	2686	146	76760
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium, 1 1/8 x 7/8 x 5/8 inch as purchased, pitted = 10 grams
(F) 2nd common measure: 1 package, 4 1/4 ounces as purchased, pitted = 75 grams

Plum, semi-dried, salted
Prunus salicina

Item no. 02-084

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 38 % seed
				11 g	75 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	28.46		1	3.13	21.34	80.04
Energy.....kcal	226			25	170	636
.....kJ	945			104	709	2658
Protein(6.25).....g	1.56		1	0.17	1.17	4.39
Lipid(fat).....g	1.67		1	0.18	1.25	4.70
Carbohydrate.....g	57.38			6.31	43.04	161.37
Fiber.....g	3.81		1	0.42	2.86	10.71
Ash.....g	10.93		1	1.20	8.20	30.74
Minerals:						
Calcium.....mg	60		1	7	45	169
Iron.....mg	11.47		1	1.26	8.60	32.26
Magnesium.....mg	44		1	5	33	124
Phosphorus.....mg	31		1	3	23	87
Potassium.....mg	282		1	31	212	793
Sodium.....mg	4193		1	461	3145	11792
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium, 1 1/4 x 15/16 x 1/2 inch as purchased, pitted = 11 grams
(F) 2nd common measure: 1 package, 4 1/4 ounces as purchased, pitted = 75 grams

Protein, lipid, and fiber values are from a different sample lot and and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Plum, semi-dried, sweet
Prunus salicina

Item no. 02-085

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 37 % seed
				12 g	100 g	
Proximate:						
Water.....g	28.88		1	3.47	28.88	82.53
Energy.....kcal	239			29	239	683
.....kJ	1000			120	1000	2858
Protein(6.25).....g	1.40		1	0.17	1.40	4.00
Lipid(fat).....g	1.44		1	0.17	1.44	4.12
Carbohydrate.....g	64.04			7.68	64.04	183.01
Fiber.....g	3.58		1	0.43	3.58	10.23
Ash.....g	4.24		1	0.51	4.24	12.12
Minerals:						
Calcium.....mg	33		1	4	33	94
Iron.....mg	1.32		1	0.16	1.32	3.77
Magnesium.....mg	22		1	3	22	63
Phosphorus.....mg	17		1	2	17	49
Potassium.....mg	120		1	14	120	343
Sodium.....mg	1570		1	188	1570	4487
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium, 1 x 7/8 x 1/2 inch as purchased, pitted = 12 grams
(F) 2nd common measure: 1 package, 5 1/2 ounces as purchased, pitted = 100 grams

Plum, semi-dried, sweet and sour
Prunus salicina

Item no. 02-086

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 48 % seed
				11 g	70 g	
Proximate:						
Water.....g	20.20		1	2.22	14.14	47.65
Energy.....kcal	281			31	197	663
.....kJ	1175			129	822	2771
Protein(6.25).....g	2.23		1	0.25	1.56	5.26
Lipid(fat).....g	2.30		1	0.25	1.61	5.43
Carbohydrate.....g	70.57			7.76	49.40	166.45
Fiber.....g	5.33		1	0.59	3.73	12.57
Ash.....g	4.70		1	0.52	3.29	11.09
Minerals:						
Calcium.....mg	123		1	14	86	290
Iron.....mg	11.22		1	1.23	7.85	26.46
Magnesium.....mg	42		1	5	29	99
Phosphorus.....mg	21		1	2	15	50
Potassium.....mg	155		1	17	108	366
Sodium.....mg	1594		1	175	1116	3760
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 5 medium, 1 x 3/4 x 5/8 inch as purchased, pitted = 11 grams
(F) 2nd common measure: 1 package, 1 1/2 ounces as purchased, pitted = 70 grams

Protein, lipid, and fiber values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Poha
Physalis peruviana

Item no. 02-087

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 140 g	454 g	Amount in edible portion of 1 pound food as purchased: Refuse: 6 % husks
Proximate:						
Water.....g	81.57		2	114.20	370.33	347.80
Energy.....kcal	64			90	291	273
.....kJ	268			375	1217	1143
Protein(6.25).....g	1.93		1	2.70	8.76	8.23
Lipid(fat).....g	0.15		1	0.21	0.68	0.64
Carbohydrate.....g	15.49			21.69	70.32	66.05
Fiber.....g	3.17		1	4.44	14.39	13.52
Ash.....g	0.87		1	1.22	3.95	3.71
Minerals:						
Calcium.....mg	7		1	10	32	30
Iron.....mg	0.93		1	1.30	4.22	3.97
Magnesium.....mg	26		1	36	118	111
Phosphorus.....mg	47		1	66	213	200
Potassium.....mg	398		1	557	1807	1697
Sodium.....mg	8		1	11	36	34
Vitamins:						
Ascorbic acid.....mg	42.00		1	58.80	190.68	179.08
Thiamin.....mg	0.166		1	0.232	0.754	0.708
Riboflavin.....mg	0.051		1	0.071	0.232	0.217
Niacin.....mg	1.780		1	2.492	8.081	7.590
Vitamin A.....RE	160			224	726	682
.....IU	1598		1	2237	7255	6814

(E) 1st common measure: 1 cup, husk removed = 140 grams
(F) 2nd common measure: 1 pound, husk removed = 454 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Poha preserve
Physalis peruviana

Item no. 02-088

Nutrients & units	Amount in 100 grams, edible portion: Mean	Standard error	Number of samples	Amount in edible portion of common measures of food: Approximate measures & weights 20 g	60 g	Amount in edible portion of 1 pound food as purchased: Refuse: 0 %
Proximate:						
Water.....g	25.56		1	5.11	15.34	115.94
Energy.....kcal	271			54	163	1229
.....kJ	1132			226	679	5135
Protein(6.25).....g	1.65		1	0.33	0.99	7.48
Lipid(fat).....g	1.01		1	0.20	0.61	4.58
Carbohydrate.....g	71.28			14.26	42.77	323.33
Fiber.....g	2.64		1	0.53	1.58	11.98
Ash.....g	0.50		1	0.10	0.30	2.27
Minerals:						
Calcium.....mg	5		1	1	3	23
Iron.....mg	0.64		1	0.13	0.38	2.90
Magnesium.....mg	19		1	4	11	86
Phosphorus.....mg	41		1	8	25	186
Potassium.....mg	293		1	59	176	1329
Sodium.....mg	6		1	1	4	27
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 tablespoon = 20 grams
(F) 2nd common measure: 1/4 cup = 60 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Pummelo or Shaddock
Citrus grandis

Item no. 02-089

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 52 % skin membrane seeds
				610 g	190 g	
Proximate:						
Water.....g	89.94		1	548.63	170.89	195.82
Energy.....kcal	34			207	65	74
.....kJ	142			866	270	309
Protein(6.25).....g	0.76		1	4.64	1.44	1.65
Lipid(fat).....g	0.04		1	0.24	0.08	0.09
Carbohydrate.....g	8.78			53.56	16.68	19.12
Fiber.....g	0.18		1	1.10	0.34	0.39
Ash.....g	0.48		1	2.93	0.91	1.05
Minerals:						
Calcium.....mg	7		1	43	13	15
Iron.....mg	0.15		1	0.92	0.28	0.33
Magnesium.....mg	5		1	30	10	11
Phosphorus.....mg	21		1	128	40	46
Potassium.....mg	211		1	1287	401	459
Sodium.....mg	2		1	12	4	4
Vitamins:						
Ascorbic acid.....mg	39.90		1	243.39	75.81	86.87
Thiamin.....mg	0.034		1	0.207	0.065	0.074
Riboflavin.....mg	0.027		1	0.165	0.051	0.059
Niacin.....mg	0.220		1	1.342	0.418	0.479
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 5 1/2 x 5 1/2 inch as purchased, peeled, membrane removed = 610 grams
(F) 2nd common measure: 1 cup, sections = 190 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Roselle
Hibiscus sabdariffa

Item no. 02-090

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 57 % seed pod stem
				2 g	40 g	
Proximate:						
Water.....g	90.96		1	1.82	36.38	177.42
Energy.....kcal	34			1	14	66
.....kJ	142			3	57	277
Protein(6.25).....g	0.96		1	0.02	0.38	1.87
Lipid(fat).....g	0.64		1	0.01	0.26	1.25
Carbohydrate.....g	6.93			0.14	2.77	13.52
Fiber.....g	1.14		1	0.02	0.46	2.22
Ash.....g	0.51		1	0.01	0.20	0.99
Minerals:						
Calcium.....mg	145		1	3	58	283
Iron.....mg	1.00		1	0.02	0.40	1.95
Magnesium.....mg	34		1	1	14	66
Phosphorus.....mg	25		1	0	10	49
Potassium.....mg	140		1	3	56	273
Sodium.....mg	4		1	0	2	8
Vitamins:						
Ascorbic acid.....mg	12.00		1	0.24	4.80	23.41
Thiamin.....mg	0.011		1	0.000	0.004	0.021
Riboflavin.....mg	0.028		1	0.001	0.011	0.055
Niacin.....mg	0.310		1	0.006	0.124	0.605
Vitamin A.....RE	17			0	7	33
.....IU	172		1	3	69	335

(E) 1st common measure: 1 medium, 1 7/8 x 3/4 inch as purchased, seed pod removed = 2 grams
(F) 2nd common measure: 1 cup, seed pod removed = 40 grams

Proximate, mineral, and ascorbic acid values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Soursop
Annona muricata

Item no. 02-091

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 625 g	225 g	Refuse: 28 % skin seeds core
A	B	C	D	E	F	G
Proximate:						
Water.....g	80.11		1	500.69	180.25	261.63
Energy.....kcal	71			444	160	232
.....kJ	297			1856	668	970
Protein(6.25).....g	0.69		1	4.31	1.55	2.25
Lipid(fat).....g	0.39		1	2.44	0.88	1.27
Carbohydrate.....g	18.23			113.94	41.02	59.54
Fiber.....g	0.95		1	5.94	2.14	3.10
Ash.....g	0.58		1	3.62	1.30	1.89
Minerals:						
Calcium.....mg	9		1	56	20	29
Iron.....mg	0.82		1	5.12	1.84	2.68
Magnesium.....mg	22		1	138	50	72
Phosphorus.....mg	29		1	181	65	95
Potassium.....mg	320		1	2000	720	1045
Sodium.....mg	22		1	138	50	72
Vitamins:						
Ascorbic acid.....mg	16.40		1	102.50	36.90	53.56
Thiamin.....mg	0.067		1	0.419	0.151	0.219
Riboflavin.....mg	0.120		1	0.750	0.270	0.392
Niacin.....mg	1.520		1	9.500	3.420	4.964
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 7 x 5 1/4 inch as purchased, peeled and strained = 625 grams
(F) 2nd common measure: 1 cup, pulp = 225 grams

Vitamin, sodium, potassium, magnesium, and iron values are from different sample lots and have been adjusted to the moisture content shown.
Vitamin values were determined on juice; other nutrients on pulp.

Strawberry
Fragaria spp.

Item no. 02-092

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 150 g	454 g	Refuse: 3 % stem cap
A	B	C	D	E	F	G
Proximate:						
Water.....g	90.51		1	135.76	410.92	398.24
Energy.....kcal	33			50	150	145
.....kJ	138			207	627	607
Protein(6.25).....g	0.76		1	1.14	3.45	3.34
Lipid(fat).....g	0.18		1	0.27	0.82	0.79
Carbohydrate.....g	8.12			12.18	36.86	35.73
Fiber.....g	0.98		1	1.47	4.45	4.31
Ash.....g	0.43		1	0.64	1.95	1.89
Minerals:						
Calcium.....mg	21		1	32	95	92
Iron.....mg	2.54		1	3.81	11.53	11.18
Magnesium.....mg						
Phosphorus.....mg	29		1	44	132	128
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	62.20		1	93.30	282.39	273.68
Thiamin.....mg	0.020		1	0.030	0.091	0.088
Riboflavin.....mg	0.040		1	0.060	0.182	0.176
Niacin.....mg	0.270		1	0.405	1.226	1.188
Vitamin A.....RE	1			2	5	4
.....IU	11		1	16	50	48

(E) 1st common measure: 1 cup, stem and cap removed = 150 grams
(F) 2nd common measure: 1 pound, stem and cap removed = 454 grams

Vitamin values are from a different sample lot and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Surinam cherry
Eugenia uniflora

Item no. 02-093

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 12 % seed blossom end
				6 g	175 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	89.03		1	5.34	155.80	355.38
Energy.....kcal	39			2	68	156
.....kJ	163			10	285	651
Protein(6.25).....g	0.46		1	0.03	0.80	1.84
Lipid(fat).....g	0.05		1	0.00	0.09	0.20
Carbohydrate.....g	10.22			0.61	17.88	40.79
Fiber.....g	0.33		1	0.02	0.58	1.32
Ash.....g	0.24		1	0.01	0.42	0.96
Minerals:						
Calcium.....mg	7		1	0	12	28
Iron.....mg	0.14		1	0.01	0.24	0.56
Magnesium.....mg	18		1	1	32	72
Phosphorus.....mg	9		1	1	16	36
Potassium.....mg	152		1	9	266	607
Sodium.....mg	4		1	0	7	16
Vitamins:						
Ascorbic acid.....mg	18.80		1	1.13	32.90	75.04
Thiamin.....mg	0.024		1	0.001	0.042	0.096
Riboflavin.....mg	0.054		1	0.003	0.094	0.216
Niacin.....mg	0.230		1	0.014	0.402	0.918
Vitamin A.....RE	112			7	196	447
.....IU	1120		1	67	1960	4471

(E) 1st common measure: 1 medium, 7/8 x 1 1/8 inch as purchased, pitted = 6 grams
(F) 2nd common measure: 1 cup, pitted = 175 grams

Proximate, mineral, carotene, and thiamin values are from different sample lots and have been adjusted to the moisture content shown.

Sweetsop
Annona squamosa

Item no. 02-094

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 64 % skin seeds core
				155 g	250 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	75.97		1	117.75	189.92	124.06
Energy.....kcal	86			133	215	140
.....kJ	360			558	900	588
Protein(6.25).....g	1.89		1	2.93	4.72	3.09
Lipid(fat).....g	0.57		1	0.88	1.42	0.93
Carbohydrate.....g	20.82			32.27	52.05	34.00
Fiber.....g	1.41		1	2.19	3.52	2.30
Ash.....g	0.75		1	1.16	1.88	1.22
Minerals:						
Calcium.....mg	17		1	26	42	28
Iron.....mg	0.30		1	0.46	0.75	0.49
Magnesium.....mg	22		1	34	55	36
Phosphorus.....mg	54		1	84	135	88
Potassium.....mg	142		1	220	355	232
Sodium.....mg	2		1	3	5	3
Vitamins:						
Ascorbic acid.....mg	35.90		1	55.64	89.75	58.62
Thiamin.....mg	0.104		1	0.161	0.260	0.170
Riboflavin.....mg	0.057		1	0.088	0.142	0.093
Niacin.....mg	0.890		1	1.380	2.225	1.453
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 4 x 4 1/2 inch as purchased, skin and seeds removed = 155 grams
(F) 2nd common measure: 1 cup, pulp = 250 grams

Proximate, vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Tamarind
Tamarindus indica

Item no. 02-095

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 2 g	110 g	Refuse: 80 % shell seeds
A	B	C	D	E	F	G
Proximate:						
Water.....g	33.89		1	0.68	37.28	30.74
Energy.....kcal	230			5	253	209
.....kJ	962			19	1058	873
Protein(6.25).....g	3.28		1	0.07	3.61	2.98
Lipid(fat).....g	0.50		1	0.01	0.55	0.45
Carbohydrate.....g	59.76			1.20	65.74	54.21
Fiber.....g	1.79		1	0.04	1.97	1.62
Ash.....g	2.57		1	0.05	2.83	2.33
Minerals:						
Calcium.....mg	114		1	2	125	103
Iron.....mg	0.60		1	0.01	0.66	0.54
Magnesium.....mg	76		1	2	84	69
Phosphorus.....mg	95		1	2	104	86
Potassium.....mg	1225		1	24	1348	1111
Sodium.....mg	15		1	0	16	14
Vitamins:						
Ascorbic acid.....mg	0		1	0	0	0
Thiamin.....mg	0.154		1	0.003	0.169	0.140
Riboflavin.....mg	0.216		1	0.004	0.238	0.196
Niacin.....mg	1.280		1	0.026	1.408	1.161
Vitamin A.....RE	0			0	0	0
.....IU	0		1	0	0	0

(E) 1st common measure: 1 medium, 2 1/2 x 1 inch as purchased, peeled and seeds removed = 2 grams
(F) 2nd common measure: 1/2 cup, pulp = 110 grams

Vitamin, sodium, potassium, and magnesium values are from different sample lots and have been adjusted to the moisture content shown.

Tangerine
Citrus reticulata

Item no. 02-096

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights 90 g	190 g	Refuse: 33 % skin membrane seeds
A	B	C	D	E	F	G
Proximate:						
Water.....g	90.16		1	81.14	171.30	274.01
Energy.....kcal	34			31	65	103
.....kJ	142			128	270	432
Protein(6.25).....g	0.71		1	0.64	1.35	2.16
Lipid(fat).....g	0.05		1	0.04	0.10	0.15
Carbohydrate.....g	8.78			7.90	16.68	26.68
Fiber.....g	0.02		1	0.02	0.04	0.06
Ash.....g	0.33		1	0.30	0.63	1.00
Minerals:						
Calcium.....mg	14		1	13	27	43
Iron.....mg	0.21		1	0.19	0.40	0.64
Magnesium.....mg	9		1	8	17	27
Phosphorus.....mg	13		1	12	25	40
Potassium.....mg	119		1	107	226	362
Sodium.....mg	3		1	3	6	9
Vitamins:						
Ascorbic acid.....mg	30.80		1	27.72	58.52	93.60
Thiamin.....mg	0.105		1	0.094	0.200	0.319
Riboflavin.....mg	0.022		1	0.020	0.042	0.067
Niacin.....mg	0.160		1	0.144	0.304	0.486
Vitamin A.....RE	83			75	158	252
.....IU	830		1	747	1577	2522

(E) 1st common measure: 1 medium, 1 3/4 x 2 5/8 inch as purchased, peeled, membrane removed = 90 grams
(F) 2nd common measure: 1 cup, sections = 190 grams

Calcium, sodium, potassium, magnesium, ascorbic acid, thiamin, and riboflavin values are from different sample lots and have been adjusted to the moisture content shown.

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Tangerine, canned (Japan)
Citrus reticulata

Item no. 02-097

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 36 % liquid
				4 g	180 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	81.54		1	3.26	146.77	236.71
Energy.....kcal	67			3	121	195
.....kJ	279			11	502	810
Protein(6.25).....g	0.46		1	0.02	0.83	1.34
Lipid(fat).....g	0.24		1	0.01	0.43	0.70
Carbohydrate.....g	17.51			0.70	31.52	50.83
Fiber.....g	0.20		1	0.01	0.36	0.58
Ash.....g	0.25		1	0.01	0.45	0.73
Minerals:						
Calcium.....mg	9		1	0	16	26
Iron.....mg	0.11		1	0.00	0.20	0.32
Magnesium.....mg	8		1	0	14	23
Phosphorus.....mg	9		1	0	16	26
Potassium.....mg	105		1	4	189	305
Sodium.....mg	7		1	0	13	20
Vitamins:						
Ascorbic acid.....mg						
Thiamin.....mg						
Riboflavin.....mg						
Niacin.....mg						
Vitamin A.....RE						
.....IU						

(E) 1st common measure: 1 small segment, 1 1/4 x 3/4 x 1/2 inch as purchased = 4 grams
(F) 2nd common measure: 1 cup, segments = 180 grams

Watermelon, Charleston Gray
Citrullus vulgaris

Item no. 02-098

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 37 % skin seeds
				520 g	150 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	92.64		1	481.73	138.96	264.74
Energy.....kcal	26			135	39	74
.....kJ	142			738	213	406
Protein(6.25).....g	0.51		1	2.65	0.76	1.46
Lipid(fat).....g	0.05		1	0.26	0.08	0.14
Carbohydrate.....g	6.54			34.01	9.81	18.69
Fiber.....g	0.05		1	0.26	0.08	0.14
Ash.....g	0.26		1	1.35	0.39	0.74
Minerals:						
Calcium.....mg	1		1	5	2	3
Iron.....mg	0.20		1	1.04	0.30	0.57
Magnesium.....mg						
Phosphorus.....mg	7		1	36	10	20
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	7.30		1	37.96	10.95	20.86
Thiamin.....mg	0.040		1	0.208	0.060	0.114
Riboflavin.....mg	0.018		1	0.094	0.027	0.051
Niacin.....mg			1			
Vitamin A.....RE	18			94	27	51
.....IU	179		1	931	268	512

(E) 1st common measure: 1 wedge, 1/16 of 18 1/2 x 8 1/4 inch melon as purchased, rind removed = 520 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 150 grams

Table 1. (Cont.) Nutritive values of foods: raw, processed, prepared

Watermelon, Chilean black seeded
Citrullus vulgaris

Item no. 02-099

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 37 % skin seeds
				260 g	150 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	90.20		1	234.52	135.30	257.76
Energy.....kcal	34			88	51	97
.....kJ	142			369	213	406
Protein(6.25).....g	0.90		1	2.34	1.35	2.57
Lipid(fat).....g	0.11		1	0.29	0.16	0.31
Carbohydrate.....g	8.42			21.89	12.63	24.06
Fiber.....g	0.10		1	0.26	0.15	0.29
Ash.....g	0.37		1	0.96	0.56	1.06
Minerals:						
Calcium.....mg	6		1	16	9	17
Iron.....mg	0.17		1	0.44	0.26	0.49
Magnesium.....mg						
Phosphorus.....mg	17		1	44	26	49
Potassium.....mg						
Sodium.....mg						
Vitamins:						
Ascorbic acid.....mg	6.00		1	15.60	9.00	17.15
Thiamin.....mg	0.038		1	0.099	0.057	0.109
Riboflavin.....mg	0.040		1	0.104	0.060	0.114
Niacin.....mg	0.200		1	0.520	0.300	0.572
Vitamin A.....RE	46			120	69	131
.....IU	464		1	1206	696	1326

(E) 1st common measure: 1 wedge, 1/16 of 9 1/4 x 9 1/2 inch melon as purchased, rind removed = 260 grams
(F) 2nd common measure: 1 cup, 1/2 inch cubes = 150 grams

Vitamin values are from different sample lots and have been adjusted to the moisture content shown.

Wi-apple
Spondias cytherea

Item no. 02-100

Nutrients & units	Amount in 100 grams, edible portion			Amount in edible portion of common measures of food		Amount in edible portion of 1 pound food as purchased
	Mean	Standard error	Number of samples	Approximate measures & weights		Refuse: 25 % skin seeds fiber
				95 g	75 g	
A	B	C	D	E	F	G
Proximate:						
Water.....g	85.94		1	81.64	64.46	292.37
Energy.....kcal	50			48	38	170
.....kJ	209			199	157	711
Protein(6.25).....g	0.53		1	0.50	0.40	1.80
Lipid(fat).....g	0.28		1	0.27	0.21	0.95
Carbohydrate.....g	12.83			12.19	9.62	43.65
Fiber.....g	0.83		1	0.79	0.62	2.82
Ash.....g	0.42		1	0.40	0.32	1.43
Minerals:						
Calcium.....mg	10		1	10	8	34
Iron.....mg	0.31		1	0.29	0.23	1.05
Magnesium.....mg	11		1	10	8	37
Phosphorus.....mg	22		1	21	16	75
Potassium.....mg	128		1	122	96	435
Sodium.....mg	1		1	1	1	3
Vitamins:						
Ascorbic acid.....mg	50.60		1	48.07	37.95	172.14
Thiamin.....mg	0.052		1	0.049	0.039	0.177
Riboflavin.....mg	0.015		1	0.014	0.011	0.051
Niacin.....mg	1.330		1	1.264	0.998	4.525
Vitamin A.....RE	36			34	27	122
.....IU	360		1	342	270	1225

(E) 1st common measure: 1 medium, 2 3/4 x 2 1/2 inch as purchased, refuse removed = 95 grams
(F) 2nd common measure: 1 small, 2 1/2 x 2 1/4 inch as purchased, refuse removed = 75 grams

Proximate, mineral, carotene and ascorbic acid values are from different sample lots and have been adjusted to the moisture content shown.

Table 2. Mean moisture values of food items, percentage

Code	Moisture			Code	Moisture		
	Mean	Standard error	Number of samples		Mean	Standard error	Number of samples
02-001	91.25		2	02-048	27.34		2
02-003	69.97		2	02-049	90.43	0.97	4
02-004	78.79		2	02-050	88.12	1.06	4
02-006	72.67		2	02-051	80.10	0.57	3
02-007	73.16	1.09	3	02-052	79.54	1.01	3
02-008	67.99	0.53	3	02-054	85.13	1.48	3
02-009	76.69	1.38	4	02-055	81.99	2.49	3
02-010	74.18		2	02-058	27.29		2
02-011	65.76	1.00	3	02-059	91.11	0.24	4
02-012	65.00		2	02-060	88.06	0.80	3
02-013	67.69	0.75	3	02-061	91.09	0.46	5
02-014	69.05	4.32	3	02-063	89.90	1.06	4
02-015	65.87	2.49	3	02-064	87.99		2
02-016	66.12	2.13	4	02-067	86.97	0.20	3
02-017	85.09	1.04	4	02-068	86.07		2
02-018	90.30	0.54	4	02-072	83.39	1.81	3
02-019	82.88	0.68	3	02-073	83.71	0.66	3
02-020	67.45		2	02-078	79.24		2
02-022	38.67		2	02-080	86.09	1.41	3
02-024	64.23		2	02-082	88.36	0.56	3
02-026	93.76		2	02-084	29.49		2
02-028	86.02	0.24	3	02-086	22.58		2
02-031	44.74		2	02-087	82.20	0.43	3
02-033	84.37	2.25	3	02-089	90.35	0.36	4
02-034	91.11		2	02-090	89.36	1.15	4
02-035	64.31		2	02-091	81.15	0.60	3
02-036	80.81	1.80	3	02-092	90.54		2
02-037	87.02	0.72	8	02-093	86.54	3.88	4
02-038	82.32		2	02-094	74.32	2.45	5
02-040	89.12		3	02-095	29.17	4.48	3
02-042	53.14	0.98	3	02-096	90.31	0.17	3
02-045	83.99	0.51	4	02-099	90.60	0.23	3
02-046	86.20		2	02-100	84.56	0.75	4

Table 3. Nutritive values of food items before adjustment to moisture value shown in Table 1

Code	Water (g)	Calcium (mg)	Potassium (mg)	Ascorbic acid (mg)	Vitamin A (mcg RE)
02-016	71.52		411		
02-035	58.85		697		
02-052	81.00			34.1	
02-054	89.50			10.0	253
02-055	86.90				308
02-060	89.60			28.9	
02-063	87.20			44.1	
02-090	86.58	215			
02-094	64.81			52.6	
02-095	20.22		1479		

Note: Refer to Results and Discussion, Nutritive Values, p. 6.

Table 4. Variation in ascorbic acid values of mango varieties (*9*)

Mango variety	Ascorbic acid (mg per 100 g)
Accession No. 1975	50
Bishop (2 seasons)	19–33
Bombay Yellow	5
Borsha	15
Boswell	30
Brooks Late (2 seasons)	28–31
Cambodiana	35
Cigar (2 seasons)	119
Common (Manini) (6 samples, 3 seasons)	70–142
Fairchild (6 samples, 3 seasons)	8–26
Goa Alphonse	43
Haden (8 samples, 3 seasons)	11–17
Hansen	5
Holt (4 samples, 3 seasons)	18–58
Joe Welch	22
Julie (2 seasons)	50–53
Kalihi	54
Kruse	20
Lemon Chutney	31
Moreland	35
Number 9	37
Ono	33
Paris	20
Pirie (6 samples, 3 seasons)	12–16
Pirie, Jordan	26
Pirie, Koboni	13
Pirie, seedling	28
Robinson	21
Sandersha	26
Seedlings	
1	34
2	37
3	92
4	97
Smith-Wootten	80
Strawberry	24
Whitney	13
Wilcox	11
Wootten (2 seasons)	51–90

Table 5. Changes in ascorbic acid values of fruit during ripening (*10*)

Fruit	Green (mg/100 g)	Half-ripe (mg/100 g)	Ripe (mg/100 g)
Mango			
Cigar	–	154	119
Common (Manini)	188	145	114
Fairchild	–	31	19
Haden	42	–	14
Indian race	–	61	56
Itamaracca	–	53	40
Number 9	43	37	30
Philippine type	–	25	15
Pirie	60	50	14
Pirie, seedling	–	60	28
Sandersha	–	33	26
Smith-Wootten	–	105	79
Strawberry	42	–	24
Wootten	103	–	63
Papaya			
Series 1 (large-fruit type)	40	53	68
Series 2 (Solo)	72	95	102
Poha	31	36	42

Table 6. Variation in sodium values of papaya in relation to the environment (*19*)

Location[1]	Water supply	Moisture (%)	*Sodium (mg per 100 g)* Food	Water	Soil
Puna, Hawaii	Rain	86.0	3.6	0.5[2]	7.6
Kipapa	Stream	85.9	3.9	2.1	7.2
Maunawili	City & County	84.6	4.4	1.4	2.9
Manoa	City & County	88.6	8.3	3.3	–
Hakipuu	City & County	84.8	9.0	3.4	6.9
Waimanalo	Irrigation ditch	84.6	10.2	2.8	12.6
Waimanalo	Irrigation ditch	85.4	13.2	2.8	12.7
Waimanalo	Irrigation ditch	85.9	15.0	2.8	14.7
Waianae[3]	Stream	86.4	15.4	5.4	12.6
Moanalua	Well	86.0	17.4	3.9	10.8
Waianae[3]	Stream	86.4	18.6	5.4	11.9
Makaha	Well	85.0	34.0	80.0	108.1
Kaneohe	City & County	86.3	45.0	1.4	8.9
Kaunakakai, Molokai[3]	Well	86.7	62.0	40.0	65.2
Kaunakakai, Molokai[3]	Well	85.6	76.0	8.0[4]	30.5

[1]Locations are for the Island of Oahu unless indicated otherwise.
[2]Rain was only source of water. Sodium content estimated to be 0.5 mg/100 g.
[3]Same farm, different seasons.
[4]Collected from open well after very heavy rainstorm.

Table 7. Factors for calculating protein from nitrogen content of food (7)[1]

Food	Factor	Food	Factor
Animal origin		*Plant origin—Continued*	
Eggs	6.25	Legumes—Continued	
Gelatin	5.55	Beans—Continued	
Meat	6.25	Soybeans	5.71
Milk	6.38	Velvetbeans	6.25
		Peanuts	5.46
Plant origin		Nuts:	
Grains and cereals:		Almonds	5.18
Barley	5.83	Brazil	5.46
Corn (maize)	6.25	Butternuts	5.30
Millets	5.83	Cashew	5.30
Oats	5.83	Chestnuts	5.30
Rice	5.95	Coconuts	5.30
Rye	5.83	Hazelnuts	5.30
Sorghums	6.25	Hickory	5.30
Wheat:		Pecans	5.30
Whole-kernel	5.83	Pinenuts	5.30
Bran	6.31	Pistachio	5.30
Embryo	5.80	Walnuts	5.30
Endosperm	5.70	Seeds:	
Legumes:		Cantaloupe	5.30
Beans:		Cottonseed	5.30
Adzuki	6.25	Flaxseed	5.30
Castor	5.30	Hempseed	5.30
Jack	6.25	Pumpkin	5.30
Lima	6.25	Sesame	5.30
Mung	6.25	Sunflower	5.30
Navy	6.25		

[1]For groups of foods not included here, the conventional factor 6.25 should be used until more is known regarding their proteins.

Table 8. Data used for calculating energy values of foods or food groups by the Atwater system (7)

Food or food group	*Protein*			*Fat*			*Carbohydrate*		
	Coefficient of digestibility (%)	Heat of combustion less 1.25[1] (Cal/g)	Factor to be applied to ingested nutrients (Cal/g)	Coefficient of digestibility (%)	Heat of combustion (Cal/g)	Factor to be applied to ingested nutrients (Cal/g)	Coefficient of digestibility (%)	Heat of combustion (Cal/g)	Factor to be applied to ingested nutrients (Cal/g)
Eggs, meat products, milk products:									
Eggs	97	4.50	4.36	95	9.50	9.02	98	3.75	3.68
Gelatin	97	4.02	3.90	95	9.50	9.02			
Glycogen							98	4.19	4.11
Meat, fish	97	4.40	4.27	95	9.50	9.02			[2]
Milk, milk products	97	4.40	4.27	95	9.25	8.79	98	3.95	3.87
Fats, separated:									
Butter	97	4.40	4.27	95	9.25	8.79	98	3.95	3.87
Other animal fats				95	9.50	9.02			
Margarine, vegetable	97	4.40	4.27	95	9.30	8.84	98	3.95	3.87
Other vegetable fats and oils				95	9.30	8.84			
Fruits:									
All (except lemons, limes)	85	3.95	3.36	90	9.30	8.37	90	4.00	3.60
All fruit juice (except lemon, lime) unsweetened	85	3.95	3.36	90	9.30	8.37	98[3]	4.00	3.92[3]
Lemons, limes	85	3.95	3.36	90	9.30	8.37	90[3]	2.75	2.48[3]
Lemon juice, lime juice, unsweetened	85	3.95	3.36	90	9.30	8.37	98	2.75	2.70
Grain products:									
Barley, pearled	78	4.55	3.55	90	9.30	8.37	94	4.20	3.95
Buckwheat flour, dark	74	4.55	3.37	90	9.30	8.37	90	4.20	3.78
Buckwheat flour, light	78	4.55	3.55	90	9.30	8.37	94	4.20	3.95
Cornmeal, whole-ground	60	4.55	2.73	90	9.30	8.37	96	4.20	4.03
Cornmeal, degermed	76	4.55	3.46	90	9.30	8.37	99	4.20	4.16
Dextrin							98	4.11	4.03
Macaroni, spaghetti	86	4.55	3.91	90	9.30	8.37	98	4.20	4.12
Oatmeal, rolled oats	76	4.55	3.46	90	9.30	8.37	98	4.20	4.12
Rice, brown	75	4.55	3.41	90	9.30	8.37	98	4.20	4.12
Rice, white or polished	84	4.55	3.82	90	9.30	8.37	99	4.20	4.16
Rye flour, dark	65	4.55	2.96	90	9.30	8.37	90	4.20	3.78
Rye flour, whole-grain	67	4.55	3.05	90	9.30	8.37	92	4.20	3.86
Rye flour, medium	71	4.55	3.23	90	9.30	8.37	95	4.20	3.99
Rye flour, light	75	4.55	3.41	90	9.30	8.37	97	4.20	4.07
Sorghum (*kaoliang*), whole or nearly whole meal	20	4.55	0.91	90	9.30	8.37	96	4.20	4.03

Wheat, 97–100 percent extraction	79	4.55	3.59	90	9.30	8.37	90	4.20	3.78
Wheat, 85–93 percent extraction	83	4.55	3.78	90	9.30	8.37	94	4.20	3.95
Wheat, 70–74 percent extraction	89	4.55	4.05	90	9.30	8.37	98	4.20	4.12
Wheat, flaked, puffed, rolled, shredded, whole meal	79	4.55	3.59	90	9.30	8.37	90	4.20	3.78
Wheat bran (100 percent)	40	4.55	1.82	90	9.30	8.37	56	4.20	2.35
Other cereals, refined	85	4.55	3.87	90	9.30	8.37	98	4.20	4.12
Wild rice	78	4.55	3.55	90	9.30	8.37	94	4.20	3.95
Legumes, nuts:									
Mature dry beans, cowpeas, peas, other legumes; nuts	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
Immature lima beans, cowpeas, peas, other legumes	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
Soybeans, dry; soy flour, flakes, grits	78	4.45	3.47	90	9.30	8.37	97	4.20	4.07
Sugars:									
Cane or beet sugar (sucrose)							98	3.95	3.87
Glucose							98	3.75	3.68
Vegetables:									
Mushrooms	70	3.75	2.62	90	9.30	8.37	85	4.10	3.48
Potatoes and starchy roots	74	3.75	2.78	90	9.30	8.37	96	4.20	4.03
Other underground crops[4]	74	3.75	2.78	90	9.30	8.37	96	4.00	3.84
Other vegetables	65	3.75	2.44	90	9.30	8.37	85	4.20	3.57
Miscellaneous foods:									
Alcohol[5]									
Chocolate, cocoa	42	4.35	1.83	90	9.30	8.37	32	4.16	1.33
Vinegar							98	2.45	2.40
Yeast	80	3.75	3.00	90	9.30	8.37	80	4.20	3.35

[1]The correction, 1.25 Calories, has been subtracted from the heat of combustion. This gives values applicable to grams of digested protein and identical with Atwater's factors per gram of available protein.

[2]Carbohydrate factor, 3.87 for brain, heart, kidney, liver; 4.11 for tongue and shellfish.

[3]Unpublished revision made since 1955.

[4]Vegetables such as beets, carrots, onions, parsnips, radishes.

[5]Coefficient of digestibility, 98 percent; heat of combustion, 7.07 Calories per gram; factor to apply to ingested alcohol, 6.93 Calories per gram.

APPENDIX A
DESCRIPTION AND TREATMENT OF SAMPLES

The history of a sample (geographic origin, cultural practices, postharvest handling, and processing) is given where known; descriptions of general eating quality, size as purchased (AP), as edible portion (EP), by weight, and by linear dimensions (length by width and height or maximum diameter), and laboratory preparation and sampling procedures are given for all food items analyzed during the period of the grant to aid the reader in assessing and interpreting the data. In addition to the common name for each item, local and ethnic names appear. The latter are from several sources, e.g., local informants, dictionaries, and food publications. The following abbreviations are used to designate the origin of non-English terms: (C) Chinese, (F) Filipino, (H) Hawaiian, (J) Japanese, and (K) Korean. The individual nutrients analyzed in each lot are identified. Copies of sample record forms appear in Appendix B.

For values taken from previous publications from this laboratory, the sample description used is from that publication and so noted. Where descriptions were incomplete, additional information was sought from the original data books. Two references, *Composition of Hawaii Fruits* (*18*) and *Vitamin Values of Foods Used in Hawaii* (*9*), state that unless otherwise indicated, it is understood that (i) samples were of good or excellent market quality, (ii) the variety was unknown if not listed, (iii) all fruits were washed and towel- or air-dried, (iv) portions taken for analyses were representative samples of the whole, (v) weights of the samples were as purchased, (vi) dimensions were given as length followed by height or diameter as purchased, and (vii) for vitamin assays, analyses were started on the day items were received.

In *Some Fruits of Hawaii* (*8*) it is noted that unless otherwise stated, all samples were taken from thoroughly mixed, fresh material not previously dried, and represented a number of fresh ripe fruits. To prevent contamination with iron or other extraneous material, samples were prepared using a stainless steel knife and a hard rubber chopping board.

A few inconsistencies in style, method of measurement, and spelling occur in Appendix A. These result from the author's wish to maintain the integrity of the original source.

ACEROLA
Barbados cherry, West Indian cherry, Aserola (F) **Item no. 02-001**

Lot 1. Approximately 2 pounds from Station Farm, Manoa, Island of Oahu. Size range: AP 5/8 to 1 inch in diameter. Ripened at room temperature, then refrigerated overnight. Washed, towel dried, seeds removed, and flesh blended prior to subsampling. Protein, lipid, fiber, calcium, iron, and niacin determined. (*18*)

Lot 2. Another 2-pound lot, harvested 2 days earlier from same source as Lot 1, of similar description and preparation. Moisture, ash, phosphorus, ascorbic acid, thiamin, riboflavin, and carotene determined. (*18*)

Lot 3. Approximately 1 pound, 449 grams, grown on Island of Oahu, obtained from Department of Horticulture. Size range: AP 5/8 by 5/8 to 15/16 by 1 1/16 inches. Excellent quality. Washed, air dried, seeds removed, and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

APRICOT, SEMIDRIED, SWEET AND SOUR
Shing tzyy, Xing-zi (C), Anzu (J) **Item no. 02-002**

One 4-ounce package, 113 grams, imported from Orient, purchased at market. Size range: apricot halves, 1 1/8 by 7/8 by 1 1/4 inches. Excellent quality. Blended prior to subsampling. Proximate composition and minerals determined.

AVOCADO, BEARDSLEE
Alligator pear, Eh li (C), Abokado (F), Abakado (K) **Item no. 02-003**

Lot 1. Three fruits, 5 pounds, grown in Manoa, Island of Oahu, from private garden. Size range: AP 5 by 4 1/4 to 5 1/4 by 4 1/4 inches. Ripened at room temperature. Proximate composition, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Four fruits, 5 pounds, 2770 grams, grown in Manoa, Island of Oahu, from same private garden. Size range: AP 4 1/4 by 3 7/8 to 5 1/2 by 4 1/2 inches. Excellent quality. Ripened at room temperature. Opposite quarters from each fruit peeled and mashed with fork. Moisture, magnesium, potassium, and sodium determined.

AVOCADO, HULUMANU
Alligator pear, Eh li (C),
Abokado (F), Abakado (K) **Item no. 02-004**

Lot 1. Nine fruits, 12½ pounds, from Hawaiian Avocado Company, Pupukea, Island of Oahu. One quarter of each fruit used, mashed with silver fork. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Three fruits, 3¾ pounds, from Station Farm, Kona, Island of Hawaii. Size range: AP 6½ to 8 inches in length. Ripened at room temperature, refrigerated 2 days. Poor quality, flesh slightly bitter and stringy. All edible portion blended prior to subsampling. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

AVOCADO, KAHALUU
Alligator pear, Eh li (C),
Abokado (F), Abakado (K) **Item no. 02-005**

Six fruits, 5¾ pounds, from Station Farm, Kona, Island of Hawaii. Size range: AP 3⅞ by 3¼ to 4⅝ by 3⅝ inches. Excellent quality. Ripened at room temperature, refrigerated as they ripened. Opposite quarters cut into 1-inch cubes. Proximate composition, calcium, iron, phosphorus, ascorbic acid, and carotene determined. (*18*)

AVOCADO, NABAL
Alligator pear, Eh li (C),
Abokado (F), Abakado (K) **Item no. 02-006**

Lot 1. Four fruits, 4½ pounds, from Laie, Island of Oahu. All edible portion mashed with silver fork. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Six fruits, 8 pounds, from Station Farm, Kona, Island of Hawaii. Size range: AP 4 by 3⅞ to 4½ by 4¼ inches. Excellent quality. Ripened at room temperature. Opposite quarters cut into 1-inch cubes. Moisture and all vitamins except niacin determined. (*18*)

BANANA, DESSERT, BLUEFIELDS OR
GROS MICHEL
Saguing, Saging (F),
Mai'a (H), Panana (K) **Item no. 02-007**

Lot 1. Twelve fruits, 3½ pounds, grown at Windward Pali, Island of Oahu, purchased at market. All edible portion mashed with silver fork. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Two and one-half pounds, 1139 grams, purchased at market. Size range: AP 6 by 1½ to 7¼ by 1½ inches; EP 5⅝ by 1¼ to 6³/₁₆ by 1¼ inches. Excellent quality. Ripened 7 days in air-conditioned laboratory. Peeled, cut into ¼-inch slices, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Eight fruits from one hand, from Kaneohe, Island of Oahu. Ascorbic acid determined. (*10*)

Lot 4. Three fruits, 1¼ pounds, grown at Waimanalo, Island of Oahu, purchased at market. Average length, 7 inches. Skin yellow with some brown flecks. Peeled, all edible portion blended. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

Lot 5. Four fruits of description similar to Lot 4. Carotene determined. (*9*)

BANANA, DESSERT, BRAZILIAN
OR "APPLE"
This variety is often erroneously
called "apple" banana in Hawaii.
Shiang jiau, Xian jiao (C),
Saguing, Saging (F),
Mai'a (H), Panana (K) **Item no. 02-008**

Lot 1. Five fruits, 1½ pounds, grown at Windward Pali, Island of Oahu, purchased at market. Ripened at room temperature. Edible portion mashed with silver fork. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Two and one-half pounds, 1169 grams, purchased at market. Size range: AP 5½ by 1½ to 7⅛ by 1⅝ inches; EP 4½ by 1⁵/₁₆ to 5¼ by 1⁷/₁₆ inches. Excellent quality. Ripened 5 days at room temperature. Half of lot peeled, cut into ¼-inch slices, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Ten fruits from one hand, 3 pounds, grown in Honolulu, Island of Oahu. Size range: 6 by 1¾ to 7 by 2 inches. Good quality. All edible portion blended prior to subsampling. Moisture and vitamins determined. (*9*)

BANANA, DESSERT, CHINESE
OR CAVENDISH
Shiang jiau, Xian jiao (C),
Saguing, Saging (F),
Mai'a (H), Panana (H) **Item no. 02-009**

Lot 1. Proximate composition determined. (*15*)

Lot 2. Twenty-five fruits from three hands, 7 pounds, grown in Manoa, Island of Oahu, purchased at market. Size range: 5 by 1⅜ to 6½ by 1½ inches. Good quality. Ripened at room temperature. Half of each hand blended prior to

subsampling. Moisture, calcium, iron, and phosphorus determined. (*18*)

Lot 3. Approximately 1½ pounds, 659 grams, purchased at market. Size range: AP 5½ by 1¼ to 5½ by 1 9/16 inches; EP 5⅛ by 1 to 5¼ by 1 1/16 inches. Excellent quality. Ripened at room temperature. Peeled, cut into ¼-inch slices, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 4. Eight fruits from one hand, from Poamoho, Island of Oahu. Ascorbic acid determined. (*10*)

Lot 5. Five fruits, 1¾ pounds, from Station Farm, Manoa, Island of Oahu. Average size: 6½ by 1½ inches. Yellow with brown specks. All edible portion blended prior to subsampling. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

Lot 6. Seven fruits from same source as Lot 5. Ripened at room temperature. All edible portion blended prior to subsampling. Carotene determined. (*9*)

BANANA, DESSERT, WILLIAMS HYBRID
Shiang jiau, Xiang jiao (C),
Saguing, Saging (F),
Mai'a (H), Panana (K) **Item no. 02-010**

Lot 1. Thirty fruits from two hands, 14 pounds, from Station Farm, Poamoho, Island of Oahu. Size range: AP 6 by 1½ to 7 by 1¾ inches. Excellent quality. Ripened at room temperature. Longitudinal half of each fruit blended prior to subsampling. Proximate composition, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Seven fruits, 1¾ pounds, 794 grams, purchased at market. Size range: AP 5½ by 1¼ to 6 by 1¼ inches; EP 5⅛ by 1 to 5⅜ by 1 1/16 inches. Excellent quality. Peeled, half of each fruit cut into 1-inch lengths, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

BANANA, PLAINTAIN OR COOKING,
LARGO
Saba (F) **Item no. 02-011**

Lot 1. Nine fruits, 5 pounds, from Station Farm, Kona, Island of Hawaii. Size range: AP 6¾ by 2¼ to 7¼ by 2¾ inches. Ripened at room temperature. All edible portion blended prior to subsampling. Moisture, protein, ash, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Twenty-four fruits, 7⅓ pounds, from a bunch weighing 9½ to 10 pounds, grown at Station Farm, Honolulu, Island of Oahu. Flesh chopped. Moisture, lipid, and crude fiber determined. (*8*)

Lot 3. Fourteen fruits from two hands, 5⅔ pounds, 2586 grams, grown at Round Top, Honolulu, Island of Oahu, from Department of Horticulture. Size range: AP 6¾ by 2 to 7½ by 2¾ inches; EP 5⅛ by 1¾ to 5⅜ by 2 inches. Good quality. Ripened at room temperature. Peeled, opposite quarters blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

BANANA, PLANTAIN OR COOKING,
MAOLI
Saba (F) **Item no. 02-012**

Lot 1. Seven fruits, 5 pounds, from Station Farm, Kona, Island of Hawaii. Average size: AP 7½ by 2⅞ inches. Ripened at room temperature and refrigerated 4 days. All edible portion blended prior to subsampling. Proximate composition, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Twelve fruits, 2½ pounds, 1150 grams, grown at Round Top, Honolulu, Island of Oahu, from Department of Horticulture. Size range: AP 4¾ by 1¼ to 5½ by 1½ inches; EP 4⅛ by 1⅛ to 4⅞ by 1⅜ inches. Good quality. Ripened at room temperature. Peeled, half of each fruit blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

BANANA, PLANTAIN OR COOKING,
POPOULU
Saba (F) **Item no. 02-013**

Lot 1. Four fruits, 2½ pounds from one bunch, from Station Farm, Kona, Island of Hawaii. Size range: AP 5½ by 2½ to 5¾ by 2½ inches. Ripened at room temperature. All edible portion blended prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Twelve fruits, 2⅓ pounds, 1061 grams, grown at Round Top, Honolulu, Island of Oahu, from Department of Horticulture. Size range: AP 4½ by 1½ to 5 by 1¾ inches; EP 3¼ by 1⅜ to 4 by 1⅝ inches. Good quality. Ripened at room temperature. Peeled, half of each fruit blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Five fruits, 1½ pounds from three hands of one bunch, from Station Farm, Poamoho, Island of Oahu. Size range: AP 4¼ by 1¾ to 4½ by 2⅝ inches. Flesh pinkish yellow. All edible portion blended prior to subsampling. Moisture and vitamins determined. (*9*)

BREADFRUIT, GREEN, RAW
Miann ban guoo, Mian bao guo (C),
Rimas (F), Ulu (H), Pan no ki no mi (J),
Ppang yolmae (K) **Item no. 02-014**

Lot 1. Analyzed raw and cooked. Five fruits, 20 pounds, 9042 grams, grown on Island of Oahu, purchased at market. Size range: AP 7 by 5 3/8 to 7 by 6 1/2 inches. Excellent quality. One-half of each fruit used for raw sample, 4466 grams. Pared, core and stem removed, flesh cut into 1/2-inch cubes, and blended prior to subsampling. Proximate composition and minerals determined.

Lot 2. Analyzed raw and cooked. Three fruits from same source as Lot 4. One-half of each fruit used for raw sample. Moisture and ascorbic acid determined. (*9*)

Lot 3. Analyzed raw and cooked. Four fruits from same source as Lot 4, another season. Size range: 7 1/2 by 5 1/2 to 8 5/8 by 5 3/4 inches. One-half of each fruit used for raw sample. Thiamin determined. (*9*)

Lot 4. Analyzed raw and cooked. Four fruits, 6 1/3 pounds, mature green stage, from trees on University campus, Manoa, Island of Oahu. Size range: 4 by 4 to 5 1/2 by 4 1/4 inches. Two fruits used for raw sample. Pared and chopped prior to subsampling. Moisture, riboflavin, niacin, and carotene determined. (*9*)

BREADFRUIT, GREEN, COOKED
Miann ban guoo, Mian bao guo (C),
Rimas (F), Ulu (H), Pan no ki no mi (J),
Ppang yolmae (K) **Item no. 02-015**

Lot 1. Refer to Item no. 02-014, Lot 1. Before cooking, wrapped individually in aluminum foil, baked 1 hour at 350°F. Cooked sample, 3545 grams, cut into 1/2-inch cubes and blended prior to subsampling. Proximate composition and minerals determined.

Lot 2. Refer to Item no. 02-014, Lot 2. Three halves wrapped individually in aluminum foil and baked 1 hour at 350°F. Moisture and ascorbic acid determined. (*9*)

Lot 3. Refer to Item no. 02-014, Lot 3. Four halves prepared as in Lot 2 but, because fruits were larger, cooked 1 1/2 hours. Thiamin determined. (*9*)

Lot 4. Refer to Item no. 02-014, Lot 4. Two fruits baked 1 hour at 350°F. Pared and chopped prior to subsampling. Moisture, riboflavin, niacin, and carotene determined. (*9*)

BREADFRUIT, RIPE, RAW
Miann ban guoo, Mian bao guo (C),
Rimas (F), Ulu (H), Pan no ki no mi (J),
Ppang yolmae (K) **Item no. 02-016**

Lot 1. Seven fruits from Nuuanu, Honolulu, Island of Oahu. Chopped prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Three fruits, 6 3/4 pounds, 3059 grams, grown in lower St. Louis Heights, Honolulu, Island of Oahu, obtained from private garden. Size range: AP 5 1/2 by 4 7/8 to 6 7/8 by 5 inches. Excellent quality. Ripened at room temperature. Opposite quarters pared, cut into 1-inch slices, mashed with fork, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Three fruits, 5 1/3 pounds, grown on University campus, Manoa, Island of Oahu. Size range: 5 by 4 3/4 to 5 1/2 by 4 1/2 inches. Ripened at room temperature. One-half of each fruit used. Moisture, ascorbic acid, and niacin determined. (*9*)

Lot 4. Four, two, and three fruits, 7 1/2, 6 1/2, and 7 pounds, respectively, from three trees on University campus, Manoa, Island of Oahu. Ripened at room temperature. Portions from each used for ascorbic acid determination. Mean ascorbic acid value adjusted for moisture content and averaged with value from Lot 3. (*18*)

Lot 5. One fruit from tree on University campus, Manoa, Island of Oahu. Ripened at room temperature, refrigerated 2 days. Moisture, thiamin, and riboflavin determined. (*9*)

Lot 6. One fruit from tree on University campus, Manoa, Island of Oahu. Ripened at room temperature and chopped. Carotene determined. (*9*)

CACTUS FRUIT
Prickly pear, Shian ren jannng guo,
Xian ren zhang guo (C), Panini (H),
Saboten no kajitsu (J),
Soninjang yolmae (K) **Item no. 02-017**

Lot 1. Eleven fruits, 4 pounds, from one plant at Alewa Heights, Island of Oahu. Size range: 2 3/4 by 2 1/4 to 3 1/2 by 2 1/2 inches. All edible portion blended and frozen. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Four fruits, approximately 1 1/4 pounds, 548 grams, purchased at market. Size range: AP 3 5/8 by 2 1/8 to 3 7/8 by 2 1/8 inches; EP 3 by 2 to 3 by 2 1/8 inches. Excellent quality. Entire sample washed, towel dried, peeled, mixed in blender to separate seeds, and strained through sieve prior

to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Twenty-eight fruits, 5 1/2 pounds, from Waianae, Island of Oahu. Average size: 3 1/4 by 2 inches. Refrigerated overnight. Thorns scraped off and all edible portion blended prior to subsampling. Moisture, ascorbic acid, thiamin, riboflavin, and niacin determined. (*9*)

Lot 4. Eight fruits from the same source, prepared as in Lot 3. Moisture and carotene determined. (*9*)

CARAMBOLA
Starfruit, Yang taur, Yang tao (C),
Bilimbi, Bilimbing (F) **Item no. 02-018**

Lot 1. Proximate composition determined. (*15*)

Lot 2. Twenty-eight fruits, 3 pounds, from Station Farm, Honolulu, Island of Oahu. Fruit cut into pieces and juice expressed through six thicknesses of cheesecloth. Moisture, ash, calcium, iron, and phosphorus determined. (*8*)

Lot 3. Twelve fruits, 3 1/3 pounds, 1510 grams, from Department of Horticulture. Size range: AP 4 1/8 by 2 1/4 to 5 1/8 by 2 3/4 inches. Excellent quality. Washed, towel dried, seeds removed, and half of each item chopped into 3/4-inch cubes and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lots 4, 5, and 6. Three lots of three or four fruits each, from different sources, different years. One lot sweet, one semisweet, and one sour. Ascorbic acid determined. Mean value reported. (*10*)

Lot 7. Eighteen fruits, 3 1/4 pounds from one tree, Honolulu, Island of Oahu. Size range: 2 3/8 by 1 3/4 to 3 1/2 by 2 1/2 inches. Cut and blended prior to subsampling. Moisture, thiamin, riboflavin, niacin, and carotene determined. (*9*)

CARISSA
Natal plum **Item no. 02-019**

Lot 1. Five to 6 pounds, grown at Kamehameha Heights, Island of Oahu. Size range: 1 by 3/4 to 1 5/8 by 1 1/2 inches. Refrigerated 2 days. About 2 pounds selected for sample. Electric grinder used for comminuting. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Three-fourths pound, 332 grams, from University campus, Manoa, Island of Oahu. Size range: AP 1 1/2 by 1 1/8 to 2 by 1 1/2 inches. Excellent quality. Washed, towel dried, seeds removed, and entire sample blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Sixty-four fruits, 2 pounds, grown at Wilhelmina Rise, Island of Oahu. Size range: 1 1/4 by 5/8 to 2 by 1 1/2 inches. Fair quality. All cut and mixed prior to subsampling. Moisture and vitamins determined. (*9*)

CHERIMOYA **Item no. 02-020**

Lot. 1. Five fruits, 6 pounds, from Station Farm, Kona, Island of Hawaii. Carters, Chaffey, and Bay varieties with two, two, and one fruit(s) respectively. Size of Bay, the largest, 3 by 3 7/8 inches. All varieties combined. Moisture, protein, ash, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Moisture and lipid determined. (*15*)

CHERRY SEED, SEMIDRIED, SWEET AND SOUR
Ing taur tzyy, Ying tao zi (C),
Pochi (K) **Item no. 02-021**

One 3 1/2-ounce package, 100 grams, imported from Orient, purchased at market. Ingredients: cherry, licorice, spice, salt, and sugar. Size range: 3/4 by 5/8 by 1/4 to 1 by 7/8 by 1/4 inch. Excellent quality. Seeds removed and entire sample blended prior to subsampling. Proximate composition and minerals determined.

COCONUT, MATURE
Ye tzyy, Ye zi (C), Niyog, Niog (F),
Niu (H), Kokoyashi no mi (J),
Yaja (K) **Item no. 02-022**

Lot 1. Four nuts from different trees on Majuro Atoll, Marshall Islands, Micronesia. Husked, wrapped in aluminum foil, stored at 10°F on Navy vessel 13 days en route to Honolulu. Transferred to freezer at 0 to -5°F. Thawed, cracked, liquid collected; meat removed along with thin brown skin and chopped into very fine pieces. Proximate composition, calcium, iron, phosphorus, and vitamins determined. (*11*)

Lot 2. Four nuts, 6 pounds, 2742 grams, grown on Island of Oahu, purchased already husked at market. Size range: AP 4 1/2 by 4 1/2 to 5 3/8 by 4 3/8 inches. Excellent quality. Coconut water drained through eyes, shell cracked in half, and mature meat grated on Hawaiian-type grater (serrated metal piece attached to wooden board). Edible portion, 1513 grams, mixed prior to subsampling. Moisture, ash, magnesium, potassium, and sodium determined.

COCONUT CREAM, FROZEN
Niyog gata (F) **Item no. 02-023**

Two 12-fluid-ounce cans, processed in Honolulu, purchased at market. Ingredients: coconut cream extracted with water from fresh coconut meat. Entire sample, 729 grams, mixed thoroughly prior to subsampling. Proximate composition and minerals determined.

COCONUT CREAM, PREPARED WITH WATER
Niyog gata (F) **Item no. 02-024**

Lot 1. Twenty-one heavy nuts selected out of 40 from two adjoining private gardens in Manoa, Island of Oahu. Water drained through pierced eyes and nuts cracked into halves. Coconut meat grated, without removing from shell, on a Polynesian grater. Total weight, 7500 grams, mixed thoroughly. One-half of lot used to prepare coconut cream with water added and other half to prepare coconut cream without water added, Item no. 02-025. To 3750 grams grated coconut, 4 3/4 cups coconut water added and thoroughly mixed by kneading with hands. About 2-cup quantities placed in one thickness of cheesecloth in a 2-quart, screw-type household press, and as much cream expressed as possible. Yield: 2000 milliliters. Proximate composition (except crude fiber), calcium, iron, phosphorus, and all vitamins except carotene determined. (*18*)

Lot 2. Four nuts, approximately 6 pounds, purchased at market. Size range: 4 1/2 by 4 1/8 to 5 1/4 by 5 inches. Water drained through pierced eyes and nuts cracked into halves. Coconut meat grated, without removing from shell, on a Polynesian grater. To 592 grams grated coconut, 3/4 cup coconut water added. Kneaded and squeezed through two thicknesses of cheesecloth. Yield: 314 grams. Moisture, magnesium, potassium, and sodium determined.

COCONUT CREAM, PREPARED WITHOUT WATER
Niyog gata (F) **Item no. 02-025**

Refer to Item no. 02-024, Lot 1. No coconut water added. Cream expressed in same manner as above. Yield: 1200 milliliters. Proximate composition (except crude fiber), calcium, iron, phosphorus, and all vitamins except carotene determined. (*18*)

COCONUT WATER
Niyog tubig (F) **Item no. 02-026**

Lot 1. Six coconuts, husks removed, grown on Island of Oahu, purchased at market. Size range: AP 4 1/2 by 4 to 6 1/8 by 5 inches. Excellent quality. Water drained through pierced eyes and filtered through four thicknesses of cheesecloth prior to subsampling. Yield: 8 1/3 cups, 1902 grams. Moisture, protein, lipid, magnesium, potassium, and sodium determined.

Lot 2. Immature nuts from Waialae Golf Course, Island of Oahu. Top of husk chopped off and small piece of soft shell cut away. Coconut water siphoned off through glass tube into beaker. Moisture, ash, calcium, iron, and phosphorus determined. (*8*)

Lot 3. Water from 11 coconuts used. Nuts varied in maturity from one with almost mature white meat, through the various soft stages, to no meat. Ascorbic acid determined. (*10*)

Lot 4. Sixteen immature nuts from University campus, Manoa, Island of Oahu. Yellow-green husks removed and nuts stored 3 days at 3°C. Water drained through pierced eyes and filtered prior to subsampling. Thiamin, riboflavin, and niacin determined. (*9*)

DRAGON EYE OR LONGAN, DRIED
Long yean gan, Long yan gan (C), Ryugan (J) **Item no. 02-027**

Two 8-ounce packages, 472 grams, imported from Orient, purchased at market. Size range: AP 1 by 1 to 1 1/16 by 1 1/8 inches; EP 3/4 by 3/4 to 3/4 by 13/16 inch. Good quality. Shells, seeds removed and entire sample blended prior to subsampling. Proximate composition and minerals determined.

FIG
Wu hua guoo, Wu hua guo (C), Piku, Fiku (H), Ichijiku (J), Muhwagwa (K) **Item no. 02-028**

Lot 1. Eighteen fruits from Punaluu, Island of Oahu. Chopped for proximate composition determination, but left whole for ash and mineral determinations. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Approximately 1 pound, 496 grams, brown variety, grown on Island of Oahu, obtained from Department of Food Science and Human Nutrition personnel. Size range: AP 1 7/8 by 1 3/4 to 2 3/8 by 2 inches; EP 1 13/16 by 1 3/4 to 2 1/8 by 2 inches. Good quality. Washed, towel dried, cut into fourths, and entire lot blended prior to

subsampling. Moisture, magnesium, potassium, and sodium determined.

Lots 3 and 4. Two lots of four figs each, different years. Ascorbic acid determined and mean value reported. (*10*)

Lot 5. Two pounds Brown Turkey variety from one tree in Manoa, Island of Oahu. Average size: 2 1/4 by 2 1/8 inches. Entire sample blended prior to subsampling. Moisture, thiamin, riboflavin, niacin, and carotene determined. (*9*)

FRUIT PUNCH BASE, FROZEN **Item no. 02-029**

Four 12-fluid-ounce cans, 1662 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: sugar, water, guava pulp and juice, passion fruit juice, pineapple juice concentrate, orange juice concentrate, lemon juice concentrate, orange, lemon, and lime oils, vitamin C, artificial coloring. Excellent quality. Entire lot thawed and mixed prior to subsampling. Proximate composition and minerals determined.

FRUIT PUNCH CONCENTRATE, HAWAIIAN, FROZEN **Item no. 02-030**

Five 6-fluid-ounce cans, 1102 grams, processed on U.S. mainland, purchased at market. Ingredients: sugar syrup, fruit juices and purees (concentrated pineapple, orange, and grapefruit juices; passion fruit juice; apricot, papaya, and guava purees), citric acid (provides tartness), ascorbic acid (vitamin C), natural fruit flavors, dextrin (a flavor carrier), artificial color, sodium benzoate, ethyl maltol (a flavor enhancer). Each 8-ounce serving contains not less than 208 percent of the recommended dietary allowance of vitamin C (125 milligrams per 8-ounce serving). Excellent quality. Entire lot thawed and mixed prior to subsampling. All nutrients except ascorbic acid determined.

FRUIT PUNCH SYRUP, IMITATION **Item no. 02-031**

Lot 1. Three 32-ounce bottles, 3516 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: sugar, water, artificial flavoring, citric acid, artificial coloring, one-tenth of 1 percent sodium benzoate, a chemical preservative. Excellent quality. One cup, 293 grams, from each bottle mixed prior to subsampling. Proximate composition determined.

Lot 2. Two 32-ounce bottles, 2358 grams, of same description as in Lot 1, purchased at market. Entire lot mixed prior to subsampling. Moisture and minerals determined.

GINGER, SEMIDRIED, SALTED
Jiang (C), Luya (F), Shioga (J), Saenggang (K) **Item no. 02-032**

One 7-ounce package, 196 grams, imported from Orient, purchased at market. Ingredients: sliced ginger, salt, sodium benzoate. Size range: 7/8 by 9/16 by 1/4 to 2 1/8 by 7/8 by 1/4 inches. Entire sample blended prior to subsampling. Proximate composition and minerals determined.

GRAPE, ISABELLA
Pwu tau, Pu tao (C), Ubas (F), Waina (H), Budō (J), Podo (K) **Item no. 02-033**

Lot 1. One 3-pound bunch from Manoa, Island of Oahu. Fruit squeezed from skin and seeds removed with ivory-tipped forceps. Pulp shredded with silver fork and dried at low temperature for several days. Aliquot for iron analysis ashed without drying. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Approximately 1 pound, 432 grams, grown at Kapahulu, Island of Oahu. Obtained from private garden. Size range: AP 9/16 by 1/2 to 3/4 by 11/16 inch; EP 1/2 by 3/8 to 11/16 by 9/16 inch. Good quality. Washed, towel dried, skin and seeds removed, and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Sample taken from several clusters of one lot. Skin and seeds removed. Ascorbic acid determined. (*10*)

Lot 4. Three pounds, 16 bunches of 30 to 40 grapes per bunch, grown on Island of Oahu. Average size: 3/4 by 5/8 inch. Skin and seeds removed. Moisture, thiamin, riboflavin, niacin, and carotene determined. (*9*)

GRAPEFRUIT
Pomelo, Pwu tau yow, Pu tao you (C), Kureip-purutu (K) **Item no. 02-034**

Lot 1. Twelve fruits, 6 pounds, from Kona, Island of Hawaii, purchased at market. Size range: 2 3/4 by 3 1/4 to 2 3/4 by 3 3/4 inches. Yellow-green skin with dark spots, pale yellow pulp. Membranes removed from all sections and pulp thoroughly mixed. Proximate composition, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Four fruits, approximately 2 1/2 pounds, 1103 grams, grown in Manoa, Island of Oahu, obtained from private garden. Size range: AP 2 5/8

by 3½ to 2⅞ by 3¾ inches; EP 2¼ by 3¼ to 2½ by 3½ inches. Excellent quality. Peeled, membranes removed from all sections, and entire sample blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

GREEN SAPOTE
Ambarella (F),
Chong chokcho (K) **Item no. 02-035**

Lot 1. Thirty-five fruits, 13 pounds, from Station Farm, Kona, Island of Hawaii. Size range: 3¾ by 2¾ to 4 by 3¾ inches. Ripened at room temperature and refrigerated as they ripened. Sixteen fruits of best quality and same stage of ripeness cut into 1-inch cubes. Cut surfaces oxidized. Proximate composition, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Twelve fruits, approximately 6 pounds, 2665 grams, from University campus, Manoa, Island of Oahu. Size range: AP 3⅝ by 2½ to 4⅜ by 3¼ inches; EP 3⅜ by 2⁷/₁₆ to 4⅛ by 3⅛ inches. Excellent quality. Ripened at room temperature. Peeled, half of each fruit cut into 1-inch cubes and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

GUAVA, CATTLEY, RED,
SEEDS REMOVED
Farn shyr liou, Fan shi liu (C),
Bayabas (F), Waiwi 'ula'ula (H) **Item no. 02-036**

Lot 1. Approximately 1 pound, 527 grams, grown at St. Louis Heights, Island of Oahu, obtained from private garden. Size range: AP ¹³/₁₆ by ¾ to 1³/₁₆ by 1⅛ inches; EP ¾ by ¾ to 1⅛ by 1⅛ inches. Good quality. Pulp containing seeds scooped out from fruit and pressed through sieve. Pulp and shells combined and blended prior to subsampling. Proximate composition and minerals determined.

Lots 2 and 3. Two lots of 10 and 11 fruits each, from two sources. Ascorbic acid determined. Mean value reported. (*10*)

Lot 4. One pound from Tantalus, Island of Oahu. Size range: ⅝ to 1 inch in diameter. Pulp scooped out from fruit, and seeds removed by pressing through sieve. Pulp and shells combined and blended prior to subsampling. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

Lot 5. One and one-half pounds from Koolau Mountain foothills near Laie, Island of Oahu. Size range: ⅝ to 1¼ inches in diameter. Whole fruit used but seeds not ground as part of sample. Moisture and carotene determined. (*9*)

GUAVA, COMMON, SEEDS
REMOVED
Farn shyr liou, Fan shi liu (C),
Bayabas (F), Kuawa (H) **Item no. 02-037**

Lot 1. Three fruits from Manoa, Island of Oahu. A lengthwise section from each fruit was analyzed separately for each nutrient. Seeds carefully removed and cleaned of all adhering flesh before being discarded. Proximate composition, calcium, iron, and phosphorus determined. Mean value of three determinations from three fruits reported. (*8*)

Lot 2. Nine fruits, 3⅓ pounds, 1517 grams, from Station Farm, Waimanalo, Island of Oahu. obtained from Department of Horticulture. Size range: AP 2½ by 2⅛ to 3½ by 3⅛ inches; EP 2⅜ by 2⅛ to 3¼ by 3⅛ inches. Excellent quality. Washed, towel dried, seeds removed, flesh and rind chopped into 1-inch pieces, and entire sample blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Four sets of fruits separated into rind and pulp. Ascorbic acid determined. Recalculated to represent whole. Ascorbic acid determined in another set of four fruits separately. Mean value of eight determinations reported. (*10*)

Lots 4 and 5. Twelve fruits, 2 pounds, from Station Farm, Poamoho, Island of Oahu. Size range: 1¾ to 2½ inches in length. Sour red pulp, small fruit. Pulp pressed through sieve; seed-free pulp and shells blended. Moisture, thiamin, riboflavin, and niacin determined. Nine fruits of similar description and from same source, prepared as in Lot 4. Moisture and carotene determined. (*9*)

Lots 6 and 7. Six fruits, 2½ pounds, from Station Farm, Poamoho, Island of Oahu. Size range: 2¼ to 3¼ inches in length. Fairly sweet, white pulp, yellow shell. Prepared as in Lot 4. Moisture, thiamin, riboflavin, and niacin determined. Ten fruits of similar description and from same source, prepared as in Lot 4. Moisture and carotene determined. (*9*)

Lots 8 and 9. Six fruits, 2½ pounds, from Station Farm, Poamoho, Island of Oahu. Size range: 2¾ to 3¾ inches in length. Fairly sweet, pink pulp, green shell. Prepared as in Lot 4. Moisture, thiamin, riboflavin, and niacin determined. Nine fruits of similar description and from same source, prepared as in Lot 4. Moisture and carotene determined. (*9*)

Vitamin values reported are adjusted mean values of Lots 4 through 9.

GUAVA, COMMON, WHOLE
Farn shyr liou, Fan shi liu (C), Bayabas (F), Kuawa (H) **Item no. 02-038**

Lot 1. Twelve fruits, 2 pounds, from Waimanalo, Island of Oahu. Fruit chopped; aliquot used for iron determination consisted of representative slices from several guavas. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. One hundred lots from different areas on Island of Oahu. Ascorbic acid assayed. Value midway between range values reported. (*10*)

Lot 3. Seventeen fruits, 3¾ pounds, from Station Farm, Poamoho, Island of Oahu. Size range: 2 by 1⅝ to 4½ by 2⅝ inches. Pink pulp, yellow shell. Fruits cut into sections; seeds part of sample but did not break during analyses. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

GUAVA, EXTRACT, HOMEMADE
Bayabas katas (F) **Item no. 02-039**

Approximately 7½ cups, 1782 grams, prepared in laboratory. Twenty-two firm, ripe fruits, 5½ pounds, 2492 grams, from University campus, Manoa, Island of Oahu. Size range: AP 2⅞ by 2¼ to 3⅞ by 2⅝ inches. Excellent quality. Washed, towel dried, cut into halves, then ½-inch slices. Placed 2437 grams fruit in pot with 1750 grams water, enough to cover fruit. Boiled gently for 15 minutes. Strained through rice bag for 2½ hours. Yield: 1782 grams extract. Pulp, 1524 grams, discarded. All nutrients except lipid and fiber determined. Lipid value from Item no. 02-040.

GUAVA, NECTAR, FROZEN, RECONSTITUTED **Item no. 02-040**

Lots 1 and 2. Proximate composition determined. (*18*)

Lot 3. One 1-quart carton, processed in Honolulu, Island of Oahu, purchased at market. Reconstituted from frozen concentrate. Ingredients: water, guava pulp and juice, sugar, citric acid, ascorbic acid (vitamin C), lemon juice concentrate, artificial coloring. An 8-ounce serving contains 30 milligrams vitamin C. Excellent quality. Sample, 977 grams, mixed thoroughly prior to subsampling. Moisture and minerals determined.

GUAVA, NECTAR, CANNED **Item no. 02-041**

Two 12-ounce cans of each of two brands, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: brand 1, water, guava pulp and juice, sugar, citric acid, artificial coloring; brand 2, all ingredients listed in brand 1 plus ascorbic acid. One-half cup from each can mixed thoroughly prior to subsampling. Proximate composition and minerals determined.

GUAVA, NECTAR, BASE, FROZEN **Item no. 02-042**

Lot 1. Three 6-ounce cans each of two brands, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: brand 2, guava juice and pulp, sugar, citric acid, vitamin C. An 8-ounce serving (of base diluted 1:3 with water) contains 30 milligrams of vitamin C, the daily adult minimum requirement. Excellent quality. Thawed, entire sample mixed thoroughly prior to subsampling. Proximate composition and minerals determined.

Lots 2 and 3. One 6-ounce can of brand 1, Lot 1. Prepared as above. Moisture and sodium determined. (*20*) One 6-ounce can of brand 2, Lot 1. Prepared as above. Moisture and sodium determined.

GUAVA, JELLY **Item no. 02-043**

One 12-ounce jar of brand 1, one 10¼-ounce jar of brand 2, and one 1-pound jar of brand 3, processed on Island of Kauai (brand 2) and in Honolulu, Island of Oahu, purchased at market. Ingredients: brand 1, guava juice, refined sugar; brand 2, not listed; brand 3, guava juice, sugar, citric acid. Excellent quality. Entire contents of three brands mixed prior to subsampling. Proximate composition and minerals determined.

GUAVA, SAUCE, HOMEMADE **Item no. 02-044**

Approximately 7¾ cups, 1596 grams, prepared in laboratory. Fourteen firm, ripe fruits, 4½ pounds, 2067 grams, from University campus, Manoa, Island of Oahu. Size range: AP 3¼ by 2¼ to 4½ by 2¾ inches. Excellent quality. Washed, towel dried, cut into halves, and seeds removed from pulp by sieving. Guava shell, 1258 grams, pulp, 349 grams, plus 1 cup water, 229 grams, simmered 15 minutes. Cooled 30 minutes. Cooked sample blended prior to subsampling. Proximate composition, minerals, and vitamins determined.

JAVA PLUM
Jambolan, Lumboi, Duhat (F) **Item no. 02-045**

Lot 1. Fruits from Kailua, Island of Oahu. Proximate composition, calcium, phosphorus, and iron determined. (*18*)

Lot 2. One and one-third pounds, 606 grams, from University campus, Manoa, Island of Oahu. Size range: 5/8 by 9/16 to 1 1/16 by 7/8 inches. Good to excellent quality. Washed, towel dried, seeds removed, and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Ten small and 10 large white-fleshed fruits from Molokai. Ascorbic acid determined. (*10*)

Lot 4. Eight and three-fourths pounds from Manoa, Island of Oahu. Average size: 1 1/8 by 7/8 inches. Purple skin, white flesh. Good quality. Seeds removed and flesh blended prior to subsampling. Moisture, thiamin, and niacin determined. (*9*)

Lot 5. Four pounds from the same source, quality, and preparation as Lot 4. Moisture, riboflavin, and carotene determined. (*9*)

KETAMBILLA
Ceylon gooseberry **Item no. 02-046**

Lot 1. One and one-fourth pounds from Waipahu, Island of Oahu. Size range: 1/2 by 3/8 to 5/8 by 3/4 inch. Slightly green fruits. All frozen. All blended and filtered through coarse cloth, known locally as "poi cloth." Extract only used. Proximate composition, calcium, phosphorus, and iron determined. (*18*)

Lot 2. Two and one-third pounds, grown on Island of Oahu. Average size: 3/4 by 7/8 inch. Some very ripe, some slightly green. All blended prior to subsampling. Moisture and vitamins determined. (*9*)

LEMON PEEL, DRIED
Ning meng pyi, Gan (C) **Item no. 02-047**

Two 1 1/4-ounce packages, 92 grams, imported from Orient, purchased at market. Ingredients: lemon, cane sugar, licorice extract, water. Size range (whole lemon pressed flat): 1 1/2 by 3/8 to 2 3/16 by 5/16 inches. Excellent quality. Entire lot used. Seeds removed, flesh blended prior to subsampling. Proximate composition and minerals determined.

LEMON, PRESERVED
Wet lemon peel **Item no. 02-048**

Lot 1. One 4 3/4-ounce package, 138 grams, imported from Orient, purchased at market. Ingredients: lemon, cane sugar, licorice extract, water. Size range (whole lemon pressed flat): 1 1/4 by 1/4 to 1 3/4 by 3/8 inches. Excellent quality. Entire lot used. Seeds removed, flesh blended prior to subsampling. Moisture, protein, fat, and fiber determined.

Lot 2. One 1 1/2-ounce package, 46 grams, purchased at market. Description and preparation as in Lot 1. Entire lot used. Moisture, ash, and minerals determined.

LIME, JUICE
Ching ning jy, Ging ning zhi (C),
Kabuyao, Dalayap (F), Laim (K) **Item no. 02-049**

Lot 1. Moisture, protein, fiber, and ash determined. (*15*)

Lot 2. Twenty-two fruits, 2 pounds, Kusaie variety from Station Farm, Manoa, Island of Oahu. Collected from one tree over 1-week period. Size range: AP 1 1/4 by 1 3/8 to 1 7/8 by 1 3/4 inches. Juice filtered through one thickness of cheesecloth. Moisture, lipid, calcium, iron, and phosphorus determined. (*18*)

Lot 3. Approximately 2 pounds, 885 grams, grown in Hawaii, purchased at market. Size range: AP 1 5/8 by 1 5/8 to 2 by 1 3/4 inches. Excellent quality. Washed, towel dried, and hand squeezed prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 4. Thirty-seven fruits, 2 pounds, Kusaie variety, purchased at market. Size range: AP 1 1/4 by 1 to 1 3/4 by 1 3/4 inches. Prepared as in Lot 2. Ascorbic acid determined. (*9*)

Lot 5. Two and three-fourths pounds, Mexican variety, purchased at market. Size range: AP 1 1/4 to 1 3/4 inches in diameter. Prepared as in Lot 2. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

LOQUAT
Japanese medlar, Pyi pa,
Pi pa (C), Biwa (J), Pipa (K) **Item no. 02-050**

Lot 1. Proximate composition determined. (*15*)

Lot 2. Approximately 1 pound, 506 grams, grown at lower Kamehameha Heights, Island of Oahu, from Department personnel. Size range: AP 1 3/8 by 1 to 1 3/4 by 1 3/8 inches; EP 1 1/4 by 1 to 1 3/4 by 1 1/4 inches. Good quality. Washed, towel dried, peeled, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Twenty-one fruits, 1 1/2 pounds, grown at Kula, Island of Maui. Size range: AP 1 3/4 by 1 3/8 to 2 1/4 by 1 7/8 inches. Refrigerated over weekend.

Good quality. Peeled and blended prior to subsampling. Moisture, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 4. Seven pounds from same source as Lot 3. Size range: AP 1 3/4 by 1 1/2 to 2 1/2 by 2 inches. Refrigerated overnight. All peeled, quartered, and mixed thoroughly prior to subsampling. Moisture, calcium, iron, phosphorus, and vitamins determined. (*18*)

Adjusted mean values of Lots 3 and 4 reported.

LYCHEE, BREWSTER
Litchi, Lih jy, Li zhi (C),
Letsias (F),Reishi (J),
Laichi (K) **Item no. 02-051**

Lot 1. Five pounds from Station Farm, Poamoho, Island of Oahu. Size range: AP 1 3/8 by 1 1/8 to 1 5/8 by 1 5/16 inches. Edible portion blended and frozen. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. One and three-fourths pounds, 816 grams, grown at Waianae, Island of Oahu, purchased at market. Size range: AP 1 1/4 by 1 1/8 to 1 1/2 by 1 1/4 inches; EP 1 1/8 by 1 to 1 1/4 by 1 1/8 inches. Good quality. Washed, fan dried, peeled, seeds removed, and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lots 3 and 4. Nine and 13 fruits respectively, from same source as Lot 2, 1 year apart. Ascorbic acid determined. (*9*)

Lot 5. Three and one-half pounds from same source as Lot 2. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

LYCHEE, KWAI MI
Litchi, Lih jy, Li zhi (C),
Letsias (F), Reishi (J),
Laichi (K) **Item no. 02-052**

Lot 1. Three and one-half pounds from Station Farm, Honolulu, Island of Oahu. Shell and seed discarded and flesh dried for several days at a low temperature, except for iron determination. Samples used for iron determination ashed without drying. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Approximately 2 pounds, 1004 grams, from Department of Horticulture. Size range: AP 1 1/2 by 1 1/4 to 1 1/2 by 1 7/16 inches; EP 1 3/8 by 1 3/16 to 1 3/8 by 1 3/8 inches. Excellent quality. Washed, fan dried, peeled, seeds removed, and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Three pounds from lower Nuuanu Valley, Island of Oahu. Size range: AP 1 3/8 by 1 1/8 to 1 1/2 by 1 1/4 inches. Harvested night before analyses started. Half of each fruit used. Moisture, ascorbic acid, thiamin, riboflavin, and niacin determined. (*18*)

LYCHEE, SEMIDRIED
Lychee nuts **Item no. 02-053**

One 8-ounce box, 224 grams, product of Taiwan, Republic of China, purchased at store. Size range: AP 1 1/8 by 1 1/8 to 1 3/8 by 1 3/8 inches; EP 1 by 13/16 to 1 1/8 by 1 inches. Excellent quality. Shell and seeds removed, flesh blended prior to subsampling. Proximate composition and minerals determined.

MANGO, HADEN
Mang guoo, Mang guo (C),
Mannga, Mangga (F),
Manako (H), Manggo (K) **Item no. 02-054**

Lot 1. Fifteen fruits, 10 pounds, from 10 trees at Station Farm, Poamoho, Island of Oahu. Size range: AP 3 3/4 by 3 1/4 to 4 1/2 by 3 5/8 inches. Ripened at room temperature. All edible portion blended prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Five fruits, 4 pounds, 1840 grams, from Station Farm, Poamoho, Island of Oahu, from Department of Horticulture. Size range: AP 3 1/2 by 3 5/16 to 4 1/4 by 4 inches; EP 3 7/16 by 3 1/4 to 4 1/8 by 3 15/16 inches. Excellent quality. Ripened at room temperature. Washed, towel dried, peeled, seeds removed, flesh cut into 1/2-inch cubes, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Ten fruits, ascorbic acid determined on each. Mean value reported. (*9*)

Lots 4 and 5. Three fruits, 2 pounds, from Station Farm, Poamoho, Island of Oahu. Size range: AP 3 to 4 1/2 inches in length. Harvested mature green and allowed to ripen in dark. Peeled and blended prior to subsampling. Moisture, thiamin, riboflavin, and niacin determined. Three fruits, 2 pounds, from Island of Kauai. Size range and preparation as in Lot 4. Riboflavin and niacin determined. (*9*)

Lot 6. Three fruits from Station Farm, Island of Oahu. Mature but firm fruit of good quality. Carotene determined. (*9*)

MANGO, PIRIE
Mang guoo, Mang guo (C),
Mannga, Mangga (F),
Manako (H), Manggo (K) **Item no. 02-055**

Lot 1. Ten fruits, 4 1/3 pounds, from Station

Farm, Island of Oahu. Ripened at room temperature and refrigerated 2 days. Peeled, seed removed, flesh sliced and chopped. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Six fruits, 2⅔ pounds, 1198 grams, of which three from Station Farm, Poamoho, from Department of Horticulture, and three from St. Louis Heights, Island of Oahu, from Department of Food Science and Human Nutrition personnel. Size range: AP 3 by 3 to 3⅛ by 3¼ inches; EP 2⅞ by 2¾ to 3 by 3 1/16 inches. Good quality. Ripened at room temperature. Washed, towel dried, peeled, cut into ½-inch cubes, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lots 3, 4, and 5. Two to four fruits from three sources, three seasons. Ascorbic acid determined. Mean value reported. (*10*)

Lot 6. Seven fruits, 3 pounds, from Station Farm, Poamoho, Island of Oahu. Size range: 3 to 3½ inches in length. Picked mature green and allowed to ripen in the dark. Peeled, seed removed, and flesh blended prior to subsampling. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

Lot 7. Three fruits from same source as Lot 6. Carotene determined. (*9*)

MANGO, CHUTNEY **Item no. 02-056**

One 11½-ounce jar of brand 1, 326 grams, processed in Honolulu, Island of Oahu, and one 10¼-ounce jar of brand 2, 285 grams, processed on Island of Kauai, purchased at market. Ingredients: brand 1, mango, sugar, vinegar, raisins, ginger, garlic, chili pepper, salt; brand 2, mango, raisins, onions, ginger, garlic, macadamia nuts, coconut and pineapple syrups, distilled vinegar, sugar, salt, cloves, chili pepper. Excellent quality. Entire lot mixed thoroughly prior to subsampling. Proximate composition, minerals, and vitamins determined.

MANGO, SAUCE **Item no. 02-057**

Approximately 4¼ cups, 1158 grams, prepared in laboratory. Six cups green or half-ripe mango slices, 1½ cups water, cooked 13 minutes until soft. One and one-half cups sugar added and cooked 5 minutes. Excellent quality. Proximate composition and minerals determined.

MANGO, SHREDDED, SWEET AND SOUR **Item no. 02-058**

Lot 1. One 5½-ounce package, 154 grams, imported from Orient, purchased at market. Ingredients: mango, sugar, salt, artificial coloring. Size range: 2 by ⅜ by ¼ to 4¼ by ½ by 5/16 inches. Excellent quality. Entire lot blended prior to subsampling. Moisture, protein, fat, and fiber determined.

Lot 2. Two 1½-ounce packages, 82 grams, imported from Orient, purchased at market. Ingredients: mango, cane sugar, salt, sodium benzoate, and U.S. certified coloring. Description, quality, and preparation similar to Lot 1. Moisture, ash, and minerals determined.

MOUNTAIN APPLE
Malay apple, Makopa (F), 'Ohi'a-'ai (H) **Item no. 02-059**

Lot 1. Twenty-nine fruits, 4 pounds. Slices dried in electric oven on enamel trays at temperature under 65°C. Proximate composition, calcium, and phosphorus determined. Fresh sample used for iron determination. (*8*)

Lot 2. Approximately 2 pounds, 938 grams, grown on Island of Oahu, purchased at market. Medium size: 2⅛ by 1¾ inches. Good quality. Washed, towel dried, seeds removed, flesh cut into ½-inch cubes and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Ten fruits from Nuuanu, Island of Oahu. Description similar to Lot 4. Ripened at room temperature for 2 days, refrigerated overnight. Ascorbic acid determined. (*9*)

Lot 4. Three pounds from Manoa, Island of Oahu, purchased at market. Size range: 1½ by 1¼ to 2 by 1½ inches. Coarsely chopped prior to subsampling. Moisture, thiamin, and niacin determined. (*9*)

Lot 5. Twelve fruits, 1 pound, from same source as Lot 4. Description and preparation similar to Lot 4. Moisture and riboflavin determined. (*9*)

MULBERRY
Sang guoo, Sang guo (C), Kilika (H), Kuwa no mi (J), Odi (K) **Item no. 02-060**

Lot 1. Two pounds from Ewa, Island of Oahu. Refrigerated over weekend. Excellent quality. Washed, fan dried, blended prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Approximately 1 pound, 474 grams, from University campus, Manoa, Island of Oahu. Size range: 5/8 by 3/8 to 1 1/8 by 1/2 inches. Excellent quality. All blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. One and one-half pounds from Makiki District, Honolulu, Island of Oahu. Berries with very small unripe areas included. Entire lot blended prior to subsampling. Moisture and vitamins determined. (*9*)

OHELO BERRY **Item no. 02-061**

Lot 1. Four pounds from Hawaii National Park, Island of Hawaii, frozen, and sent air freight. Frozen upon receipt. Washed, fan dried, and entire lot blended prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Approximately 1 pound, 477 grams, grown at Hawaii National Park, Island of Hawaii, from National Park Service. Size range: 3/8 by 3/8 to 1/2 by 5/8 inch. Good to excellent quality. Washed, fan dried, and entire lot blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lots 3 and 4. Lots from two seasons, from Volcano District, Island of Hawaii. Moisture and ascorbic acid determined. (*10*)

Lot 5. Two and one-third pounds, grown at Hawaii National Park, Island of Hawaii, sent air freight. Size range: 1/4 to 1/2 inch in diameter. Good quality. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

OLIVE, DRIED, SWEET AND SOUR
Gaan laan, Gan lan (C), Oribu (J), Olibu (K) **Item no. 02-062**

One 7-ounce package, 197 grams, imported from Orient. Purchased at market. Ingredients: olives, licorice, salt, sugar, artificial coloring. Size range (one-half of pitted olive): 1 1/8 by 5/8 by 3/8 to 1 3/4 by 3/4 by 3/8 inches. Excellent quality. Entire lot blended prior to subsampling. Proximate composition and minerals determined.

ORANGE
Jyu tzyy/cherng, Juzi/cheng (C), Kahel (F), Alani (H), Daidai (J), Kyul (K) **Item no. 02-063**

Lot 1. Twelve fruits from Kealakekua, Island of Hawaii. Sections without surrounding membranes used. Not possible to chop or mash sections without losing comparatively large quantities of juice, so true composite sample not prepared. Where more than one section used, these taken from several different fruits. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Six fruits, 3 3/4 pounds, 1699 grams, from Island of Hawaii, purchased at market. Size range: AP 2 1/2 by 2 5/8 to 3 3/4 by 4 1/8 inches; EP 2 1/8 by 2 7/16 to 3 1/4 by 3 3/8 inches. Good quality. Peeled, membrane removed from sections, and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Five fruits, 1 1/2 pounds, from Kona, Island of Hawaii, purchased at market. Slightly sour. Average size: 2 1/4 by 2 3/4 inches. Peeled, membranes removed from sections, and pulp blended prior to subsampling. Moisture and ascorbic acid determined. (*9*)

Lot 4. Seven fruits, 3 pounds, purchased at market. Size: 3 by 3 1/2 inches. Prepared as in Lot 3. Moisture, thiamin, riboflavin, niacin, and carotene determined. (*9*)

ORANGE, JUICE, RECONSTITUTED **Item no. 02-064**

Lot 1. Proximate composition determined. (*13*)

Lot 2. One 1/2-gallon size of brand 1 and one 1-quart size of brand 2, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: brand 1, orange juice from concentrate; brand 2, water, orange juice concentrate. One quart of each brand mixed prior to subsampling. Moisture and minerals determined.

PAPAYA, GREEN, RAW
Muh gua, Mu gua (C), Tapaya, Kapaya (F) **Item no. 02-065**

Analyzed raw and cooked. Twelve fruits, 17 pounds, 7805 grams, purchased at market. Size range: AP 4 7/8 by 3 5/8 to 6 1/4 by 4 7/8 inches; EP 4 11/16 by 3 1/2 to 6 1/16 by 4 3/4 inches. Excellent quality. One-half of each fruit used for raw sample, 3802 grams. Halves cut into four lengthwise sections, alternating lengthwise sections pared and seeds removed. Cut into 1/4- to 3/8-inch slices and blended prior to subsampling. Proximate composition and minerals determined.

PAPAYA, GREEN, COOKED
Muh gua, Mu gua (C), Tapaya, Kapaya (F) **Item no. 02-066**

Refer to Item no. 02-065. Before cooking,

pared, seeds removed, flesh cut lengthwise and sliced into 1/4- to 3/8-inch slices. Steamed 15 minutes. Cooked sample, 2150 grams, cut into small pieces and blended prior to subsampling. Proximate composition and minerals determined.

PAPAYA, SOLO, HERMAPHRODITE
Pawpaw, Muh gua, Mu gua (C),
Tapaya, Kapaya (F), He'i (H) **Item no. 02-067**

Lot 1. Five fruits, 5 pounds, 2526 grams, from Station Farm, Waimanalo, Island of Oahu. Size range: AP 4 3/4 by 3 to 5 1/4 by 4 inches. Ripened at room temperature. Each fruit cut into quarters, then one longitudinal slice from each quarter pooled. Skin and seeds removed, and flesh blended prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Two fruits, 3 1/4 pounds, 1450 grams, from Island of Hawaii, purchased at market. Size: AP 6 1/2 by 3 3/4 and 6 1/4 by 4 1/4 inches; EP 6 by 3 5/8 to 5 7/8 by 4 1/8 inches. Excellent quality. Ripened at room temperature. Opposite longitudinal quarters used from each fruit, skin and seeds removed, flesh cut into 1/2-inch cubes and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Forty-five samples from Station Farm, Poamoho, Island of Oahu, and 40 samples from Kailua, Island of Oahu, collected at weekly intervals over a 1-year period, except month of August. Ascorbic acid determined. Mean value reported. (*10*)

Lot 4. Four fruits, 2 1/2 pounds, from Station Farm, Poamoho, Island of Oahu. Size range: 4 1/2 to 5 1/2 inches in length. Edible portion blended prior to subsampling. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

Lot 5. Five fruits, 5 1/4 pounds, purchased at market. Prepared as in Lot 4. Thiamin, riboflavin, niacin, and carotene determined. (*9*)

Adjusted mean values of Lots 4 and 5 reported for thiamin, riboflavin, and niacin.

PAPAYA, SOLO, PISTILLATE
Pawpaw, Muh gua, Mu gua (C),
Tapaya, Kapaya (F), He'i (H) **Item no. 02-068**

Lot 1. Five fruits, 8 2/3 pounds, 3938 grams, from Station Farm, Waimanalo, Island of Oahu. Size range: AP 4 1/4 by 3 1/2 to 4 3/4 by 4 1/4 inches. Ripened at room temperature for 3 days. Each fruit cut into quarters, then one longitudinal slice from each quarter pooled. Skin and seeds removed and flesh blended prior to subsampling. Proximate composition, calcium, iron, phosphorus, ascorbic acid, and carotene determined. (*18*)

Lot 2. Four fruits, 3 1/4 pounds, from Station Farm, Poamoho, Island of Oahu. Size range: 3 1/2 to 4 inches in length. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

PAPAYA, DRINK, CANNED **Item no. 02-069**

Six 12-fluid-ounce cans, 2160 grams, product of Hawaii, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: water, papaya pulp and juice, sugar, citric acid, ascorbic acid. Each 6-fluid-ounce serving contains 30 milligrams of vitamin C, 50 percent of the adult recommended dietary allowance. Excellent quality. Entire lot mixed thoroughly prior to subsampling. Proximate composition and minerals determined.

PAPAYA-PASSION FRUIT,
NECTAR, CANNED **Item no. 02-070**

Five 12-fluid-ounce cans, 1938 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: water, papaya juice and pulp, sugar, passion fruit juice, citric acid, guar gum, vitamin C. One 6-ounce serving provides twice the adult minimum daily requirement (60 milligrams) of vitamin C. Excellent quality. Entire lot mixed thoroughly prior to subsampling. Proximate composition and minerals determined.

PAPAYA-PINEAPPLE,
NECTAR, CANNED **Item no. 02-071**

Six 12-fluid-ounce cans, 2220 grams, product of Hawaii, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: water, papaya pulp and juice, sugar, pineapple juice, citric acid, ascorbic acid. Each 6-fluid-ounce serving contains 30 milligrams of vitamin C, 50 percent of the adult recommended dietary allowance. Excellent quality. Entire lot mixed thoroughly prior to subsampling. Proximate composition and minerals determined.

PASSION FRUIT, PURPLE,
JUICE
Purple granadilla, Bae shiang guoo,
Bai xiang guo (C), Pasyonarya (F),
Liliko'i (H), Tokeisō no mi (J) **Item no. 02-072**

Lot 1. Eighty-six fruits, 7 pounds, from Station Farm, Kona, Island of Hawaii. Fruits cut in halves, pulp and seeds removed from shell with silver spoon. Juice expressed by squeezing

pulp and seeds in four thicknesses of cheesecloth. Moisture, protein, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Fifteen fruits from Kokee, Island of Kauai. Size range: AP 1½ by 1½ to 1¾ by 1½ inches. Good quality. Pulp and seeds squeezed through two thicknesses of cheesecloth. Moisture, lipid, and fiber determined. (*18*)

Lot 3. Five and one-half pounds from Kokee, Island of Kauai. Size range: AP 1¾ by 1½ to 2 by 1⅞ inches. Partially ripe fruit stored until shells turned purple. Prepared as in Lot 2. Moisture and vitamins determined. (*9*)

PASSION FRUIT, YELLOW, JUICE
Bae shiang guoo, Bai xiang guo (C), Pasyonarya (F), Yellow liliko'i (H), Tokeisō no mi (J) **Item no. 02-073**

Lot 1. Eight 8-ounce jars of fruit from Station Food Processing Laboratory. Juice prepared in pilot plant juicer, pulp and juice separated from seeds and frozen in plastic bags for 4 months. One bag thawed to fill jars and refrozen after being transferred to the Department of Foods and Nutrition. Proximate composition, calcium, iron, and phosphorus determined. (*18*)

Lot 2. Twelve fruits, 2½ pounds, 1133 grams, from Station Farm, Waimanalo, Island of Oahu. Size range: 2¼ by 1⅞ to 2½ by 2¼ inches. Good quality. Fruits cut in halves, pulp with seeds mixed in blender to separate pulp from seeds, and strained through sieve prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Four fruits from Pensacola Station, Honolulu, Island of Oahu. Strained through four thicknesses of cheesecloth. Ascorbic acid determined. (*10*)

Lot 4. Sixty-three fruits, 6 pounds, from Department of Horticulture. Harvested over a 3-week period and refrigerated until analyzed. Pulp and seeds squeezed through two thicknesses of cheesecloth. Moisture, thiamin, riboflavin, niacin, and carotene determined. (*9*)

PASSION FRUIT, JUICE, BASE, FROZEN **Item no. 02-074**

Six 6-fluid-ounce cans, 1282 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: sugar, passion fruit juice, water, citric acid, vitamin C. One 4-ounce serving provides the adult minimum daily requirement (30 milligrams) of vitamin C. Entire sample mixed prior to subsampling. All nutrients determined.

PASSION FRUIT–ORANGE, NECTAR **Item no. 02-075**

One ½-gallon carton, 1990 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: water, sugar, passion fruit juice and pulp, orange juice concentrate, ascorbic acid, orange oil flavor, sodium alginate stabilizer, artificial coloring. Excellent quality. Entire sample mixed prior to subsampling. Proximate composition and minerals determined.

PASSION FRUIT–ORANGE, DRINK, CANNED **Item no. 02-076**

Two 12-fluid-ounce cans of brand 1 and two 12-fluid-ounce cans of brand 2, 1518 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: brand 1, water, sugar, concentrated orange juice, passion fruit pulp and juice, orange oil, citric acid, ascorbic acid, artificial color; one 4-fluid-ounce serving contains 30 milligrams of vitamin C, the daily adult minimum requirement; brand 2, water, sugar, passion fruit juice, orange concentrate, orange oil, citric acid, ascorbic acid, artificial coloring. Excellent quality. One-half cup from each can, each brand, mixed prior to subsampling. Proximate composition and minerals determined.

PEAR (JAPAN)
20th century pear, Li (C), Peras (F), Nihon-nashi (J), Pae (K) **Item no. 02-077**

Ten fruits, 7⅓ pounds, 3351 grams, imported from Japan, purchased at market. Size range: AP 2⅞ by 3½ to 3¼ by 3¾ inches. Excellent quality. Washed, quartered, core removed. Opposite longitudinal quarters from each fruit blended prior to subsampling. Proximate composition and minerals determined.

PERSIMMON, HACHIYA
Shyh, Shi (C), Kaki (J), Kam (K) **Item no. 02-078**

Lot 1. Thirteen seedless fruits, 5 pounds, grown on Island of Maui, purchased at market. Size range: AP 2¼ by 2¼ to 3 by 2¾ inches. Ripened at room temperature. Peeled, separated into sections, cut crosswise, and mixed.

Proximate composition, calcium, iron, phosphorus, and vitamins determined. (*18*)

Lot 2. Four fruits, 1 1/3 pounds, 626 grams, grown on Island of Maui, purchased at market. Size range: AP 2 7/8 by 2 1/2 to 3 by 2 7/8 inches; EP 2 5/8 by 2 5/16 to 2 5/8 by 2 5/8 inches. Peeled and entire sample blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

PERSIMMON, DRIED
Hoshigaki, Korogaki (J) **Item no. 02-079**

Twenty-one fruits, approximately 2 pounds, 813 grams, product of Japan, purchased at market. Size range: AP 2 1/2 by 1 3/4 by 3/4 to 3 1/16 by 1 3/4 by 7/8 inches. Excellent quality. Stem end removed, entire sample cut into 1/4-inch pieces prior to subsampling. Proximate composition, minerals, and vitamins determined.

PINEAPPLE, SMOOTH CAYENNE
Feng li/bo luo (C), Pinya (F),
Hala kahiki (H), Painapul (K) **Item no. 02-080**

Lot 1. Four fruits, 18 pounds, grown at Robinson Section, Wahiawa, Island of Oahu. Size range: AP (without crown) 8 1/2 to 9 1/2 inches in length, 5 to 6 inches in diameter. Skin removed and edible portion diced prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Two fruits, 8 3/4 pounds, 3957 grams, grown on Island of Oahu, purchased at market. Size range: AP 7 3/4 by 5 1/8 to 6 5/8 by 5 3/4 inches; EP 6 1/4 by 4 1/2 to 6 by 4 1/2 inches. Excellent quality. Washed, fan dried, pared, chopped, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Three fruits, Cayenne variety, from Pineapple Research Institute of Hawaii, Honolulu, Island of Oahu. Opposite longitudinal quarters from each fruit blended prior to subsampling. Ascorbic acid, thiamin, and carotene determined. (*9*)

Lot 4. Three fruits, same variety and from same source as Lot 3. Plants had been treated with hormones. Cross-sectional slices from each fruit blended prior to subsampling. Moisture, riboflavin, and niacin determined. (*9*)

PINEAPPLE-GRAPEFRUIT,
JUICE, CONCENTRATE,
FROZEN **Item no. 02-081**

Six 6-fluid-ounce cans, 1254 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: concentrated pineapple juice, concentrated grapefruit juice, citric acid, ascorbic acid, grapefruit oil. Mixed with 3 parts water, one 6-fluid-ounce serving contains 100 percent of the recommended daily dietary allowance of vitamin C (60 milligrams). Thawed and mixed without dilution prior to subsampling. Proximate composition, minerals, and vitamins determined.

PLUM, METHLEY
Mei (tzyy)/li, Mei (zi)/li (C),
Puramu (J), Pulam (K) **Item no. 02-082**

Lot 1. From 40 pounds of fruit, 6 1/3 pounds selected. Grown at Kokee, Island of Kauai. Size range: AP 1 1/4 by 1 1/8 to 1 3/4 by 1 5/8 inches. Good quality. Washed and dried with cheesecloth. Skin removed and analyzed separately from flesh. Blended separately prior to subsampling. Proximate composition, calcium, iron, and phosphorus determined separately on skin and flesh but calculated for whole fruit. Ascorbic acid and riboflavin determined on whole fruits. (*18*)

Lot 2. Twelve fruits, approximately 2/3 pound, 284 grams, grown at Kokee, Island of Kauai. Size range: AP 1 1/4 by 1 1/4 to 1 1/2 by 1 1/2 inches. Good quality but small due to dry season. Washed, towel dried, seeds removed, flesh cut into 3/8-inch slices, and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Forty-five fruits, 2 pounds, 885 grams, from Kokee, Island of Kauai, purchased at market. Size range: AP 1 1/8 by 1 1/8 to 1 1/2 by 1 3/8 inches. Excellent quality. Seeds removed. Moisture, thiamin, niacin, and carotene determined. (*9*)

PLUM, DRIED, SALTED
Salted see moi (C) **Item no. 02-083**

One 7-ounce package, 198 grams, imported from Orient, purchased at market. Ingredients: plum, water, salt. Size range: 15/16 by 3/4 to 1 3/16 by 15/16 inches. Excellent quality. Seeds removed, flesh blended prior to subsampling. Proximate composition and minerals determined.

PLUM, SEMIDRIED, SALTED
Wet li hing mui (C) **Item no. 02-084**

Lot 1. One 4 1/4-ounce package, 125 grams, purchased at market. Ingredients: plum, licorice, salt, sugar, water, artificial sweetener, imitation vanilla. Size range: 7/8 by 3/4 by 3/8 inch to 1 1/8 by 1 1/8 by 1/2 inches. Excellent quality. Seeds removed and flesh blended prior to

subsampling. Moisture, protein, lipid, and fiber determined.

Lot 2. One 4 1/4-ounce package, 124 grams, same brand as in Lot 1, purchased at market. Same ingredients, size range, quality, and preparation as in Lot 1. Moisture, ash, and minerals determined.

PLUM, SEMIDRIED, SWEET **Item no. 02-085**

One 5 1/2-ounce package, 159 grams, purchased at market. Ingredients: plum, licorice, salt, sugar, water. Size range: 1 by 11/16 by 7/16 to 1 3/16 by 1 1/16 by 1/2 inches. Excellent quality. Seeds removed and flesh blended prior to subsampling. Proximate composition and minerals determined.

PLUM, SEMIDRIED, SWEET AND SOUR **Item no. 02-086**

Lot 1. One 4 1/2-ounce package, 126 grams, imported from Orient, purchased at market. Ingredients: plum, licorice extractives, salt, sugar, water. Size range: 3/4 by 11/16 by 1/2 to 1 1/8 by 7/8 by 5/8 inches. Excellent quality. Seeds removed and flesh blended prior to subsampling. Moisture, protein, lipid, and fiber determined.

Lot 2. Three 1 1/2-ounce packages, 136 grams, same brand as in Lot 1, purchased at market. Same ingredients, size range, quality, and preparation as in Lot 1. Moisture, ash, and minerals determined.

POHA
Cape gooseberry, Husk tomato, Pa'ina (H), Hōzuki (J) **Item no. 02-087**

Lots 1 and 2. Two 4-pound lots from Kona, Island of Hawaii, 3 months apart. Husks of fruit removed and each fruit wiped with clean cheesecloth. Samples for all determinations except iron were taken from material that had been dried for several days at low temperature and ground in a glass mortar. Fresh material without previous drying was ashed for iron determination. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 3. One and one-half pounds, 704 grams, grown on Island of Lanai, husked and frozen, from Lanai resident. Size range: EP 5/8 by 5/8 to 5/8 by 3/4 inch. Excellent quality. Thawed and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lots 4 and 5. Two samples from Volcano District, Island of Hawaii. Assayed 36 hours after harvest. Each sample made up of eight representative berries. Ascorbic acid determined; mean value reported. (*10*)

Lot 6. One pound, grown on Island of Hawaii, purchased from wholesaler. Fruit husked and edible portion blended prior to subsampling. Moisture, thiamin, and riboflavin determined. (*9*)

Lot 7. Two pounds from same source as Lot 6. Size range: EP 5/8 by 5/8 to 3/4 by 3/4 inch. Preparation same as in Lot 5. Niacin and carotene determined. (*9*)

POHA PRESERVE **Item no. 02-088**

Three 12-ounce jars, 1041 grams, processed in Honolulu, Island of Oahu, purchased at market. Ingredients: poha, refined sugar. Excellent quality. Entire sample mixed prior to subsampling. Proximate composition and minerals determined.

PUMMELO OR SHADDOCK
Yaw, You (C), Lukban, Suha (F), Jabon, Zabon (J), Churan kyul (K) **Item no. 02-089**

Lot 1. Three fruits, 7 1/2 pounds, 3458 grams, Thong Dee variety from Station Farm, Poamoho, Island of Oahu. Size range: AP 5 1/4 by 5 1/2 to 5 1/2 by 5 3/4 inches. Ripened at room temperature. Skin and membrane removed. Proximate composition, calcium, iron, phosphorus, and ascorbic acid determined. (*18*)

Lot 2. Three fruits, approximately 7 pounds, 3121 grams, from Station Farm, Poamoho, Island of Oahu, from Department of Horticulture. Size range: AP 5 5/16 by 5 1/2 to 5 3/4 by 6 inches; EP 4 by 4 3/4 to 4 by 4 7/8 inches. Excellent quality. Ripened at room temperature. Washed, towel dried, peeled, opposite quarters from each fruit used. Membranes removed and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Three fruits, 8 1/2 pounds, from Station Farm, Poamoho, Island of Oahu. Moisture and thiamin determined. (*9*)

Lot 4. Two fruits, 7 pounds, grown in private garden in Manoa, Island of Oahu. Size range: AP 6 1/2 by 5 to 6 by 6 1/2 inches. Good quality. Peeled, membranes removed, and flesh blended prior to subsampling. Moisture, riboflavin, and niacin determined. (*9*)

ROSELLE
Jamaica sorrel, Red sorrel **Item no. 02-090**

Lot 1. Proximate composition determined. (*15*)

Lot 2. Two-thirds pounds, 298 grams, grown in private garden, lower Kamehameha Heights, Island of Oahu. Size range: 1 1/2 by 11/16 to 2 1/2 by 7/8 inches. Excellent quality. Washed, fan dried, seed pods removed, and calyxes blended prior to subsampling. Moisture and minerals determined.

Lot 3. One pound from Station Farm, Manoa, Island of Oahu. Size range: 1 by 3/4 to 2 by 1 1/4 inches. Only calyxes used. Cut coarsely and mixed prior to subsampling. Moisture and ascorbic acid determined. (*9*)

Lot 4. Six pounds from same source as Lot 3. Size range and preparation same as in Lot 3. Moisture, thiamin, riboflavin, niacin, and carotene determined. (*9*)

SOURSOP
Gayubano, Guayabano (F),
Togeban reishi (J), Kasiyoji (K) **Item no. 02-091**

Lot 1. One fruit, 4 1/3 pounds, from Station Farm, Honolulu, Island of Oahu. Size: 11 by 5 1/2 inches. Ripened at room temperature. Fruit peeled, seeds removed, and flesh sliced and chopped. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Two medium-sized fruits, 3 3/4 pounds, 1748 grams, grown on Island of Oahu, purchased at market. Size range: AP 6 1/2 by 4 5/8 to 7 by 4 1/2 inches; EP 6 1/8 by 4 3/8 to 6 1/2 by 4 1/4 inches. Good quality. Peeled, seeds removed, flesh surrounding seeds mashed with spoon prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Two fruits, 4 pounds, grown in Honolulu, Island of Oahu. Size range: 5 1/2 by 4 1/2 to 8 1/2 by 3 1/2 inches. One fruit riper than other. Fruit pulp first pressed through colander to form puree, then squeezed through cheesecloth. Moisture, ascorbic acid, thiamin, riboflavin, and niacin determined. (*9*)

STRAWBERRY
Tsao mei, Cao mei (C),
Istroberi (F), 'Ohelo papa (H),
Ichigo (J), Ttalki (K) **Item no. 02-092**

Lot 1. One pound from Kaneohe, Island of Oahu. Fruits carefully washed, caps discarded. Pulp prepared for analysis by chopping. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Two pounds, 880 grams, purchased from wholesaler. Size range: AP 1/2 by 3/4 to 1 1/4 by 1 inches. Good quality. Cut coarsely prior to subsampling. Moisture and vitamins determined. (*9*)

SURINAM CHERRY
Pitanga (F) **Item no. 02-093**

Lot 1. One and one-half pounds from Station Farm, Honolulu, Island of Oahu. Carefully selected cherries wiped with clean cheesecloth. Stems, seeds, and blossom ends discarded and flesh used without further treatment. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. One and one-half pounds, 663 grams, from University campus, Manoa, Island of Oahu. Size range: AP 7/8 by 1 to 1 by 1 1/8 inches. Excellent quality. Seeds and blossom ends removed, and flesh blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Three-fourths pound, 304 grams, Kanda variety, from Station Farm, Poamoho, Island of Oahu. Size range: 3/4 by 5/8 to 1 by 3/4 inch. Good quality. Stems and seeds removed and flesh blended prior to subsampling. Moisture, ascorbic acid, riboflavin, and niacin determined. (*9*)

Lot 4. Approximately one pound, 400 grams, of same variety, source, and size as in Lot 3, harvested 4 days after Lot 3. Good quality. Blossom ends and seeds removed, and flesh blended prior to subsampling. Moisture, thiamin, and carotene determined. (*9*)

SWEETSOP
Sugar apple, Atis (F), Banreishi (J),
Pallyoji (K) **Item no. 02-094**

Lots 1 and 2. Proximate composition determined. Adjusted mean values used. (*15*)

Lot 3. Three fruits, 2 2/3 pounds, 1207 grams, grown on Island of Hawaii, from Department of Horticulture. Size range: AP 3 1/2 by 3 5/8 to 4 by 4 1/2 inches. Good quality. Fruits cut into halves, pulp scooped out with spoon and blended at low speed to separate seed from pulp. Seeds removed and pulp blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 4. One fruit, 1 pound, 450 grams, from same source as Lot 5, 3 months later. Size: 3 3/4 by 4 1/4 inches. Excellent quality. Prepared as in Lot 3. Moisture, calcium, iron, and phosphorus determined. (*18*)

Lot 5. Five fruits, 2 pounds, 877 grams, grown on Alewa Heights, Island of Oahu. Ripened at room temperature, refrigerated as they ripened. Three good, two fair quality. Prepared as in Lot 3. Moisture, ascorbic acid, thiamin, riboflavin, and niacin determined. (*18*)

TAMARIND
Sampalok (F), Wi'awa'awa (H),
Tamarindo (J), Tamarindu (K) **Item no. 02-095**

Lot 1. Four and one-half pounds from tree at Punahou School, Honolulu, Island of Oahu. Shell removed from fruit, sticky pulp scraped from seeds and mixed well. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lot 2. Four and two-thirds pounds, 2126 grams, from University campus, Manoa, Island of Oahu. Size range: AP 1 7/8 by 3/4 to 3 3/4 by 1 inches. Fair quality (dry season). Shell removed and fruit stored overnight in refrigerator. Pulp scraped from seed and mixed prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Nine pounds, 4020 grams, from private garden in Manoa, Island of Oahu. Size range: AP 3/4 by 3/4 to 4 by 3/4 inches. Fair quality. Prepared as in Lot 1. Moisture, ascorbic acid, thiamin, riboflavin, and niacin determined. (*9*)

TANGERINE
Jue tzyy/Mih gan,
Ju zi/mi gan (C),
Mikan (J), Milgam (K) **Item no. 02-096**

Lot 1. Twenty-four fruits, 5 1/2 pounds, 2550 grams, grown on Island of Hawaii, purchased at market. Size range: AP 1 7/8 by 2 1/2 to 1 7/8 by 2 3/4 inches. Good quality. Refrigerated overnight. Peeled, membranes removed from each section, and pulp from entire sample mixed prior to subsampling. Proximate composition, iron, phosphorus, niacin, and carotene determined. (*18*)

Lot 2. Six fruits, 1 1/2 pounds, 667 grams, grown on Island of Hawaii, purchased at market. Size range: 1 7/8 by 2 5/8 to 2 1/8 by 2 3/4 inches. Excellent quality. Peeled, membranes removed from each section, and pulp blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 3. Twelve fruits, 3 pounds, 1360 grams, grown in Puna, Island of Hawaii, from wholesaler. Size range: 1 1/2 by 2 3/8 to 1 3/4 by 2 1/2 inches. Good quality. Refrigerated 1 week. Prepared as in Lot 1. Moisture, calcium, ascorbic acid, thiamin, and riboflavin determined. (*18*)

TANGERINE, CANNED
Mandarin orange, Sintones,
Dalanghita (F), Mikan (J) **Item no. 02-097**

Two 11-ounce cans each of three brands, 1230 grams drained weight, products of Japan, purchased at market. Ingredients: brand 1, mandarin orange whole segment, water, sugar; brand 2, peeled whole mandarin orange segments in light syrup; brand 3, peeled mandarin orange segments, water, sugar. Uniform size: 1 1/4 by 3/4 by 1/2 inches. Fruit drained, syrup discarded, and fruit blended prior to subsampling. Proximate composition and minerals determined.

WATERMELON, CHARLESTON GRAY
Pakwan (F), Ipu, Ipu'ai maka (H),
Suika (J), Subak (K) **Item no. 02-098**

Five melons, 120 pounds, opposite eighths, 13,620 grams, from Station Farm, Waimanalo, Island of Oahu. Size range: AP 14 1/2 by 7 1/2 to 20 by 9 inches. Excellent quality. Refrigerated 4 days. Shell and seeds removed from opposite one-eighth longitudinal sections, and flesh blended prior to subsampling. Proximate composition, calcium, iron, phosphorus, and all vitamins except niacin determined. (*18*)

WATERMELON, CHILEAN BLACK SEEDED
Shi gua, Xi gua (C), Pakwan (F),
Ipu, Ipu'ai maka (H), Suika (J),
Subak (K) **Item no. 02-099**

Lot 1. Two melons, 38 pounds, from wholesaler. Shell and seeds removed, flesh diced. Proximate composition, calcium, iron, and phosphorus determined. (*8*)

Lots 2 and 3. Two melons, one each from Islands of Maui and Oahu. Mean of 14 separate assays on flesh from stem ends, centers, and bud ends of each melon. Ascorbic acid determined. (*10*)

Lot 4. Three melons, medium sized, from Waimanalo, Island of Oahu, purchased. Longitudinal wedges from each melon, 4 pounds, 1813 grams. Rind and seeds removed. Moisture, thiamin, and carotene determined. (*9*)

Lot 5. Four 1-pound wedges, 1783 grams, from two melons grown at Kahuku, Island of Oahu, purchased at market. Good quality. Moisture, riboflavin, and niacin determined. (*9*)

WI-APPLE
Otaheite apple, Vi-apple **Item no. 02-100**

Lot 1. Proximate composition determined. (*15*)

Lot 2. Thirteen fruits, 4 1/2 pounds, 2037 grams, from private garden in Honolulu, Island of Oahu. Size range: AP 2 3/8 by 2 1/8 to 3 by 2 7/8

inches. Pared, seed removed, and slices put through Foley food mill to prepare pulp. Fibrous residue discarded. Moisture, protein, ash, calcium, iron, and phosphorus determined. (*18*)

Adjusted mean protein and ash values in Lots 1 and 2 reported.

Lot 3. Seven fruits, 1 3/4 pounds, 814 grams, grown on Island of Oahu, purchased at market. Size range: AP 2 1/2 by 2 1/4 to 2 7/8 by 2 1/2 inches; EP 2 3/8 by 2 1/8 to 2 3/4 by 2 3/8 inches. Excellent quality. Ripened 9 days at room temperature. Pared, seed removed, and all flesh, except the hard fibrous tissue surrounding seed cavity, sliced off and blended prior to subsampling. Moisture, magnesium, potassium, and sodium determined.

Lot 4. Thirteen fruits, 3 1/4 pounds, 1476 grams, from private yard in Honolulu, Island of Oahu. Size range: AP 2 1/4 by 2 to 3 by 2 3/8 inches. Ripened at room temperature. Ascorbic acid and carotene determined. (*9*)

Lot 5. Eight fruits, 3 pounds, 1366 grams, from same source as Lot 4. Size range: AP 2 1/4 to 3 1/4 inches in length. Ripened at room temperature. Prepared as in Lot 3. Moisture, thiamin, riboflavin, and niacin determined. (*9*)

APPENDIX B
SAMPLE RECORD FORMS

SAMPLE RECORD FOR FRESH FOOD PRODUCTS

INSTRUCTIONS: Provide complete information, using UNK if information is unknown, or NA if not applicable to the food item. Leave blank only if information is to be completed at a later date. Use additional sheets if necessary to record all pertinent information. Record in ink.

NAME (As it appears in Appendix to Grant Proposal)

Other common, local or ethnic name(s)

Brand name(s). Include name of firm, distributor/packer, city, etc.

CODE (As it appears in Appendix to Grant Proposal)

COLLECTION

Date (Received in laboratory)

Source: person, store, agency, etc.

Purchase price

Description: (Xerox published description if available, for items unfamiliar to USDA)

Quality	Shape
Quantity	Color
	Texture
	Taste

Size	Length, width, height, diameter, AP (inches)	Weight AP (grams)
S		
M		
L		

Reference for description

TREATMENT PRIOR TO COLLECTION (Retain labels from container with Sample Record)

Locality (where grown)

Fertilizer and pesticide treatment

Harvest date, or if market sample, storage period and temperature

LABORATORY PREPARATION OF SAMPLE AND SAMPLING

Total weight of sample (grams)

Waste: description and weight (grams). (If waste composed of different parts, e.g., cores, skin, report weights separately)

Percent waste: average, maximum, minimum

Edible portion: description, color, shape, texture, taste

Size	Length, width, height, diameter, EP (inches)	Weight EP (grams)
S		
M		
L		

Steps in preparation: washed, dried, peeled, chopped (size e.g., 1" cubes, 1/4" lengths), comminuted, blended, etc.

Cooking of sample: (Follow procedures described in cited publications e.g., HAES Technical Bulletin 30)

Type of cooking: steamed, boiled, etc.
Weight before cooking (grams)
Weight after cooking (grams)
Volume of water used for boiling (ml)
Volume and weight of water discarded (ml, grams)
Volume and weight of water included as sample (ml, grams)
Cooking period (minutes)
Comments

Sampling: (Check one)

____ Half of lot or each item used for Raw Sample, Code____; half for Cooked Sample, Code____.

____ Entire sample mixed to prepare composite and aliquots taken for individual analyses.

____ Opposite_____from individual items mixed to prepare composite and aliquots taken for individual analyses.

____ Other (describe)

HOUSEHOLD OR COMMON MEASURES - VOLUME AND WEIGHT (Make at least five separate measurements of common measures - cups, tablespoons, slices, wedges, etc.)

ANALYTICAL PROCEDURES AND DATA (Check off the nutrients analyzed from this sample and insert page number for raw data. Indicate any significant deviations from methods indicated in Grant Proposal.)

MOISTURE (p.)	CALCIUM (p.)	CAROTENE (p.)
PROTEIN (p.)	PHOSPHORUS (p.)	THIAMIN (p.)
FAT (p.)	IRON (p.)	RIBOFLAVIN (p.)
CHO (p.)	SODIUM (p.)	NIACIN (p.)
CRUDE FIBER (p.)	POTASSIUM (p.)	ASCORBIC ACID (p.)
ASH (p.)	MAGNESIUM (p.)	
ENERGY (p.)		

Analyses to be done:

NOTE: Number additional pages (place label page last) and place code on upper right hand corner.

Recorded by_____Date_____
Checked by_____Date_____

Revised 10/72 NSW

Code_____

Data for raw or cooked items.

Item no.*	L, w, h, dia, AP+ (inches)	Wt, AP (grams)	L, w, h, dia, EP+ (inches)	Wt, EP (grams)	Wt, waste, parts (grams)	Waste (Percent)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
Total or mean						

* Indicate items representing small, medium, large.

\+ Circle appropriate dimensions: length, width, height, (stem to blossom end), diameter.

Data for cooked items (continued).

Item	Pan 1	Pan 2	Total
Sample, raw (grams)			
Sample, cooked (grams)			
Liquid included as sample (grams)			
Liquid included as sample (ml)			

SAMPLE RECORD FOR PROCESSED AND PREPARED FOOD PRODUCTS

INSTRUCTIONS: Provide complete information, using UNK if information is unknown, or NA if not applicable to the food item. Leave blank only if information is to be completed at a later date. Use additional sheets if necessary to record all pertinent information. Record in ink.

NAME (As it appears in Appendix to Grant Proposal)

Other common, local or ethnic name(s)

Brand name(s) including name of firm, distributor/packer, city, etc.

CODE (As it appears in Appendix to Grant Proposal)

COLLECTION

Date (Received in laboratory)

Source (Person, store, agency, etc.)

Purchase price

Description (Follow special format for canned goods and similar items.)

Quality	Shape
Quantity	Color
	Texture
	Taste

Size	Length, width, height, diameter, AP (inches)			Weight AP (grams)		
	Brand 1	2	3	Brand 1	2	3
S						
M						
L						

Reference for description

TREATMENT PRIOR TO COLLECTION (Retain labels from containers with Sample Record)

Type of processing: cooked, canned, dehydrated, freeze-dried, frozen, salted, fermented, etc. (Processing for standard items will not be described unless specifically requested)

Ingredients and quantities including preservatives, additives

Description of cooking and/or processing: steamed, boiled, baked, roasted, broiled, fried, deep-fat fried, braising, etc. Request information from processor or cite reference if standard item but unfamiliar to USDA.

For imported items: origin of product, repackaging information, etc.

Storage period and temperature

LABORATORY PREPARATION OF SAMPLE AND SAMPLING

Total sample weight or net weight (grams)

Waste: description, weight, and volume if liquid discarded (grams and ml)

Percent waste: (average, maximum, minimum)

Edible portion: description, color, shape, texture, taste

Size	Length, width, height, diameter, EP (inches)			Weight EP (grams)		
	Brand 1	2	3	Brand 1	2	3
S						
M						
L						

Steps in preparation: washed, dried, peeled, chopped (size e.g., 1/2" cubes, 1/4" strips), comminuted (size e.g., 60 mesh in Wiley Mill), blended

Cooking of sample: (Follow procedures described in cited publications e.g., HAES Technical Bulletin 30)

Type of cooking: steamed, boiled, etc.
Weight before cooking (grams)
Weight after cooking, drained solids (grams)
Volume water used for boiling (ml)
Volume and weight of water discarded (ml, grams)
Volume and weight of water included as sample (ml, grams)
Cooking period (minutes)
Comments

Sampling: (Check)

____ Entire sample mixed to prepare composite, and aliquots taken for individual analyses.
____ _____ grams or ml from all brands or packages mixed to prepare composite, and aliquots taken for individual analyses.
____ Opposite_____from individual items mixed to prepare composite and aliquots taken for individual analyses.
____ Other (describe)

HOUSEHOLD OR COMMON MEASURES - VOLUME AND WEIGHT (Make at least five separate measurements of common measures - cups, tablespoons, slices, wedges, etc.)

ANALYTICAL PROCEDURES AND DATA (Check off the nutrients analyzed from this sample and insert page number for raw data. Indicate any significant deviations from methods indicated in Grant Proposal.)

MOISTURE (p.)	CALCIUM (p.)	CAROTENE (p.)
PROTEIN (p.)	PHOSPHORUS (p.)	THIAMIN (p.)
FAT (p.)	IRON (p.)	RIBOFLAVIN (p.)
CHO (p.)	SODIUM (p.)	NIACIN (p.)
CRUDE FIBER (p.)	POTASSIUM (p.)	ASCORBIC ACID (p.)
ASH (p.)	MAGNESIUM (p.)	
ENERGY (p.)		

Analyses to be done:

NOTE: Number additional pages (place label page last) and place code on upper right hand corner.

Recorded by_____Date_____
Checked by_____Date_____

Revised 10/74 NSW

Code_____

Description for canned goods and similar items.

Brand

Net weight (grams)

Drained sample
weight (grams)

Drained sample
weight (cups)

Drained liquid
weight (grams)

Drained liquid
volume (ml, cups,
or fluid ounce)

Percent waste

Color, viscosity, etc.

Form e.g., whole,
halves, pieces, etc.

Number

Number per pound (calc'd)

Size range, AP (inches)

Small

Medium

Large

Weight range, AP (grams)

Small

Medium

Large

Size of can or
volume of container,
plastic, paper, etc.
height x diameter (inches)

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